4305
FIRST AVENUE (WV)

4305 FIRST AVENUE (WV), LLC
430 First Ave. • Nitro, West Virginia 25143
p. 304-766-0300 • f. 304-766-0306

August 25, 2016

Assistant Director for Permitting
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Subject: Application for Rule 13 Construction Air Permit - 4305 First Avenue (WV), LLC

Dear Assistant Director:

4305 First Avenue (WV), LLC hereby submits the enclosed application for a Rule 13 Minor New Source Construction Air Permit for the operation of a paint booth and sand blasting equipment at our Nitro Annex located at 4301 1st Avenue in Nitro, WV.

Please note that we have included one original paper set of the application and two electronic copy sets of the application on CD. Enclosed with the original paper set of the application is our application fee check in the amount of $1,000.00, made payable to WVDEP–Division of Air Quality.

Also enclosed within Attachment D to the air permit application is 4305 First Avenue (WV), LLC's completed Petition for Exemption, 40 CFR Part 63 Subpart HHHHHH Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.

The enclosed application does not contain any confidential business information. 4305 First Avenue (WV), LLC will submit to WVDEP-DAQ in the near future the original affidavit of publication for the required Public Notice Class I legal advertisement.

We would appreciate the opportunity to review a pre-draft version of the Rule 13 air permit.

4305 First Avenue (WV), LLC thanks WVDEP-DAQ for its consideration of this matter. Should you require any additional information, please contact me at chad.shamblin@allcrane.com or 304-766-0300.

Thank you,

Chad Shamblin
General Manager

Enclosures

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WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.wvdep.org/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☒ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☐ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
4305 First Avenue (WV), LLC

2. Federal Employer ID No. ***(FEIN):***
38-3975046

3. Name of facility *(if different from above):*
Nitro Annex

4. The applicant is the:
☒ **OWNER** ☐ **OPERATOR** ☐ **BOTH**

5A. Applicant's mailing address:
4305 First Avenue (WV), LLC
Attention: Chad Shamblin
140 West 19th Street
Nitro, WV 25143

5B. Facility's present physical address:
4305 First Avenue (WV), LLC
4301 1st Avenue
Nitro, WV 25143

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**

- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation: Katpil Six Enterprises, LLC

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

- If **YES,** please explain: The applicant owns the site.
- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Equipment Maintenance, Painting and Repair Facility

10. North American Industry Classification System **(NAICS)** code for the facility:
811310

11A. DAQ Plant ID No. (for existing facilities only):
NA

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
NA

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

From Interstate 64 driving west from Charleston, take the Nitro exit (Exit 45). At the bottom of the exit ramp, drive straight across State Route 25 to 1st Avenue. Turn right on 1st Avenue and proceed 0.3 mile to the facility on the left.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
4301 1st Avenue	Nitro	Putnam
12.E. UTM Northing (KM): 4,255.775	12F. UTM Easting (KM): 427.547	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Applicant proposes to add an Equipment Maintenance and Repair Facility to the site, including one grit blasting booth, one paint spray booth and a vehicle washing bay.

14A. Provide the date of anticipated installation or change: Upon issuance of permit – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: Upon issuance of permit

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? ☒ **YES** ☐ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) **.**
– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**
– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☐ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	

☒ General Emission Unit, specify: Paint Spray Booth Data Sheet, Grit Blasting Booth Data Sheet, Air Dryer Heaters Data Sheet, Hotsy Water Heater Data Sheet, Spray Gun Cleaning Machine Data Sheet; Clean-up Operations Data Sheet.

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☒ Other Collectors, specify: Paint booth filters; Grit booth dust collector.

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33**. Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ *(Please use blue ink)* DATE: 8/25/16 *(Please use blue ink)*

35B. Printed name of signee: Chad Shamblin		35C. Title: General Manager
35D. E-mail: chad.shamblin@allcrane.com	36E. Phone: 304-766-0300	36F. FAX: 304-766-0306
36A. Printed name of contact person (if different from above): Rick Wilson		36B. Title: Principal Consultant
36C. E-mail: rwilson@trcsolutions.com	36D. Phone: 304-476-7037	36E. FAX: 304-346-2591

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☒ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☒ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☐ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☐ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***
- ☐ ***For Title V Administrative Amendments:***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***
- ☐ ***For Title V Minor Modifications:***
  - ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***
- ☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***
  - ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
  - ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
  - ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment A

Business Certificate

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
4305 FIRST AVENUE (WV), LLC
4700 ACORN DR
INDEPENDENCE, OH 44131-6940

BUSINESS REGISTRATION ACCOUNT NUMBER: **2319-0830**

This certificate is issued on: **07/27/2015**

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them. CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

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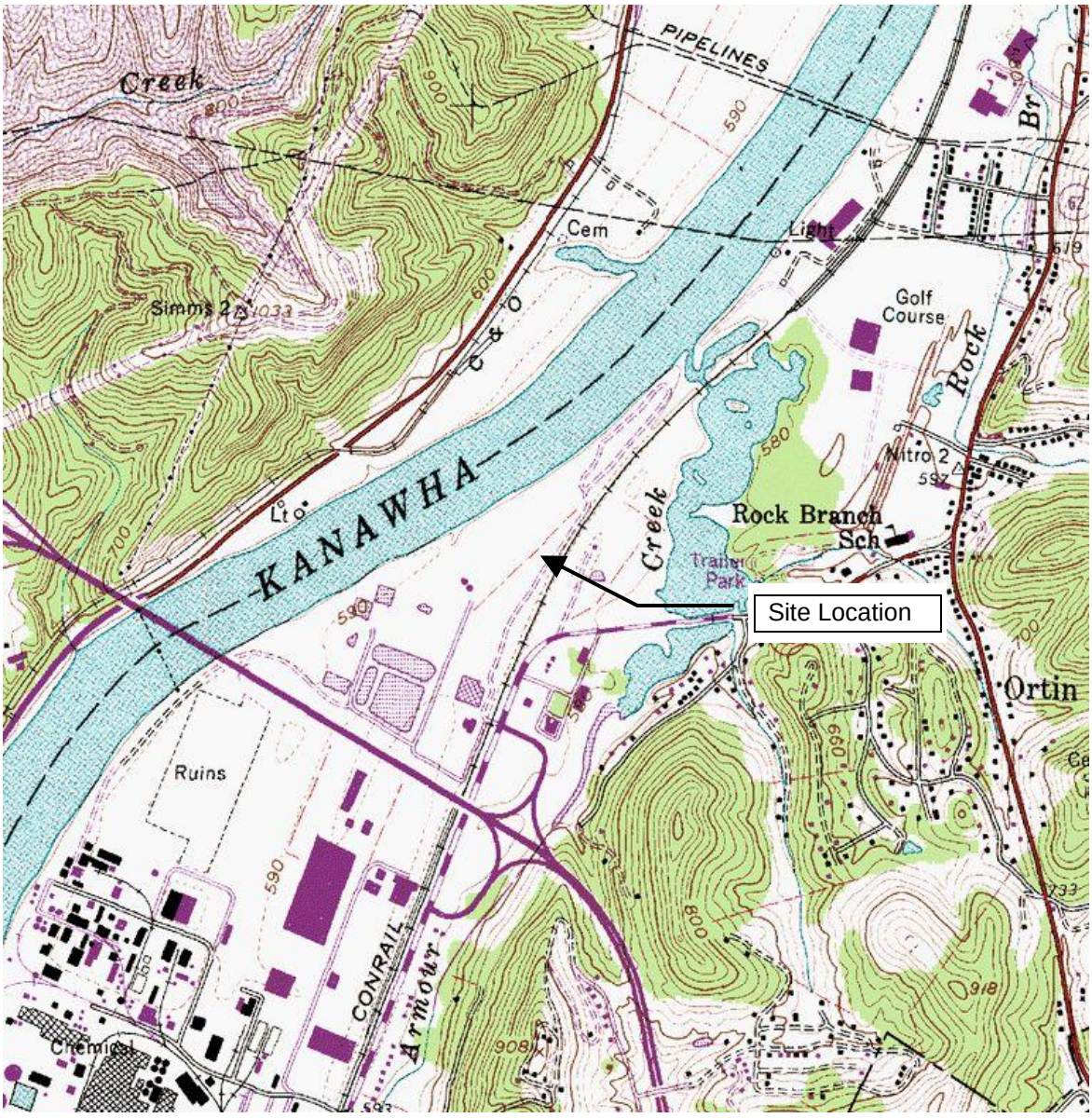
ATTACHMENT B – SITE LOCATION MAP

4305 First Avenue (WV), LLC
Nitro Annex

USGS Map Name: Saint Albans, WV Map MRC: 38081D7
UTM Zone: 17N Datum: NAD27 Zoom: 4m/pixel
Topo obtained from: www.topoquest.com



ATTACHMENT C – INSTALLATION & START UP SCHEDULE

Proposed Facility Construction	Installation Date	Initial Startup Date
Add an Equipment Maintenance and Repair Facility to the site, including one grit blasting booth, one paint spray booth and a vehicle washing bay.	Upon issuance of permit	Upon issuance of permit

ATTACHMENT D – REGULATORY DISCUSSION

The following table discusses Clean Air Act applicable regulatory requirements that 4305 First Avenue (WV), LLC believes to apply as a result of this proposed permitting action.

Presumed Applicable CAA Requirements			
Regulatory Citation	**Emission Source Affected**	**Description of Applicability**	**Compliance Demonstration**
45CSR2-3.1	Paint Booth Heaters HE-1 & HE-2 Hotsy Water Heater HW-1	45CSR2-3.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.	Compliance is assured by combustion of natural gas fuel.
45CSR13-5.4	New emission units	Construction of a stationary source that will be a minor source of regulated air pollutant emissions.	Apply for a permit to construct; comply with all Rule 13 permit requirements.
45CSR21-30.	Automatic Spray Gun Cleaner GC-1	45CSR21-30.3.a.1.-9. Solvent metal cleaning - cold cleaning facilities: Design standards and operating practices for cold solvent metal cleaning facilities.	Comply with any applicable Rule 21 Section 30.3.a.1.-9. requirements.

ATTACHMENT D – REGULATORY DISCUSSION

The following table discusses Clean Air Act regulatory requirements that 4305 First Avenue (WV), LLC believes do not apply as a result of this proposed permitting action.

Presumed Non-Applicable CAA Requirements		
Regulatory Citation	**Affected Source**	**Rationale for Non-Applicability**
45CSR21-19.	Coating of Miscellaneous Metal Parts.	The Paint Booth PB-1 is exempt from Section 19. because: • The 4305 First Avenue (WV), LLC-Nitro Annex paint booth is utilized for truck and crane parts refinishing (exempt per 45CSR21-19.1.c.3.). • The truck and crane parts maintenance refinishing operation at 4305 First Avenue (WV), LLC-Nitro Annex will be in NAICS 811310/SIC 7699, which is exempt from regulation because it does not meet the definition of "Miscellaneous parts and products" (per 45CSR21-19.2.g.).
45CSR21-40.	Other Facilities that Emit Volatile Organic Compounds (VOC)	The 4305 First Avenue (WV), LLC-Nitro Annex will emit less than the Section 40. threshold applicability of aggregate maximum theoretical emissions of 90.7 megagrams (mg) (100 tons) or more of VOCs per calendar year in the absence of control devices.
40CFR63 MACT Subpart HHHHHH	National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources	Subpart HHHHHH is not applicable, per §63.11170(a)(2)-(3) because the 4305 First Avenue (WV), LLC-Nitro Annex will not spray coatings that contain the target HAP metals (as defined in §63.11180): lead, chromium, manganese, nickel, or cadmium. Also, the facility will not perform paint stripping operations that involve the use of chemical strippers that contain methylene chloride in paint removal processes. 4305 First Avenue (WV), LLC will submit a Subpart HHHHHH Petition for Exemption (see attached pages at the end of this Attachment D) to EPA Region III for the Nitro Annex, per §63.11170(a)(2), in order to certify that the facility does not spray coatings that contain the target HAP.

ATTACHMENT D – REGULATORY DISCUSSION

Presumed Non-Applicable CAA Requirements		
Regulatory Citation	**Affected Source**	**Rationale for Non-Applicability**
40CFR63 MACT Subpart XXXXXX	National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories	Subpart XXXXXX is not applicable because the 4305 First Avenue (WV), LLC-Nitro Annex is not primarily engaged in the nine source categories listed in §63.11514 as further described in Table 1 to Subpart XXXXXX.

Petition for Exemption

Paint Stripping and Miscellaneous Surface Coating Operations

Area Source Rule

40 CFR Part 63 Subpart HHHHHH (63.11169 – 63.11180 and Table 1)

In accordance with 40 CFR §63.11170(a)(2), an owner or operator of a motor vehicle or mobile equipment surface coating operation (including refinishing operations) may petition the United States Environmental Protection Agency (EPA) Administrator to exempt the operation from the surface coating regulatory requirements of 40 CFR Part 63 Subpart HHHHHH, if the owner or operator can demonstrate that the spray-applied coatings used by the facility do not contain target hazardous air pollutants (HAP) (paint stripping requirements still apply).

Note: in determining whether you spray apply target HAP containing coatings, do not include coatings applied using hand-held aerosol cans, or hand-held devices (*e.g.*, spray guns) with a paint cup capacity of 3 fluid ounces or less. These are not considered spray-applied coatings under the rule. *See*, "spray-applied coating operations" definition at 40 CFR §63.11180.

As defined in 40 CFR §63.11180, coatings are "target HAP containing coatings" if they contain compounds of chromium (Cr), lead (Pb), nickel (Ni), cadmium (Cd), or manganese (Mn) above a given concentration. If a compound is not carcinogenic, then the rule allows a higher concentration of the compound before the coating is considered to be a target HAP containing coating, as described here:

- Target HAP containing coatings are defined to include carcinogens, coatings containing compounds of hexavalent chromium (Cr+6) (*e.g.*, chromates), lead (Pb), nickel (Ni), or cadmium (Cd), if those compounds comprise more than 0.1% of the coating by mass.
- Target HAP containing coatings also include noncarcinogens, coatings containing compounds of trivalent chromium (Cr+3) or manganese (Mn), if those compounds comprise more than 1.0% of the coating by mass.
- Refer to the coating Material Safety Data Sheets (MSDS) or obtain documentation from your supplier for each coating that you spray apply without mixing. If you mix coatings prior to application, determine the target HAP concentration for each coating mixture that you spray apply.

1. General Information

Company Name	**4305 First Avenue (WV), LLC**				
Facility Name	**Nitro Annex**				
Mailing Address	**140 West 19th Street**		Telephone Number		**304-766-0300**
City	**Nitro**	State	**WV**	Zip	**25143**

Facility Location (if different from above):

Street Address	**4301 1st Avenue**			County	**Putnam**
City	**Nitro**	State	**WV**	Zip	**25143**

Location where your facility compliance records are maintained:

Street Address	**4301 1st Avenue**	County	**Putnam**		
City	**Nitro**	State	**WV**	Zip	**25143**

2. Describe your surface coating operation and explain why your facility qualifies for the exemption under 40 CFR §63.11170 (a)(2).

4305 First Avenue (WV), LLC is a truck, trailer and mobile crane and associated equipment service facility. Equipment is repaired and refinished on an as-needed basis. An exemption from rule applicability is requested because coatings used at this facility do not contain any target HAP compounds as defined by the rule.

3. Description of Spray-Applied Coatings

Identify the manufacturer(s) and product line(s) of all the spray-applied coatings used at this facility. Attach additional pages to this petition, if necessary.

Manufacturer	Product Line
Axalta Coating Systems, LLC	Corlar® Epoxy Primers (825P28300™ / 825P30018™ / 825P30020™ / 825P30022™)
Axalta Coating Systems, LLC	Corlar® Activators (937S™ / 938S™/946S™/947S™/948S™)
Axalta Coating Systems, LLC	Imron® Elite Productive Topcoat 2.8 VOC (EX Quality)
Axalta Coating Systems, LLC	Imron® Elite Productive Topcoat 3.5 VOC (EX Quality)
Axalta Coating Systems, LLC	Imron® Topcoats (15P29585™ / 15P29586™ / 15P34090™ / 15R29584™)
Axalta Coating Systems, LLC	Imron® Accelerators (189S™ / 389S™)
Axalta Coating Systems, LLC	Imron® Activators (15305S™ / 15307S™ /15308S™ /15309S™)
Axalta Coating Systems, LLC	Imron® Reducers (15375S™ / 15385S™ /15395S™ /15397S™ / 15399S™)
Axalta Coating Systems, LLC	Cleaning Solvent 3800S™
ChemSpec USA, Inc.	CRV22 Acrylic Urethane Clear
ChemSpec USA, Inc.	CR22AM Activator
Grow Automotive	KEY 81 Urethane Reducer
Eastman Chemical Company	Methyl n-Amyl Ketone

4. Certification Statement

I have consulted reliable analyses (material safety data sheets or information obtained from the coating manufacturer) of the coatings that are used in this facility and have determined that we do not spray apply target HAP containing coatings as defined in 40 CFR §63.11180. Furthermore, I have verified that none of the coatings mixed prior to application contain target HAP as spray-applied, based on the definition of "target HAP containing coatings". I certify, under penalty of law, to the truth, accuracy, and completeness of the information provided in this petition. If circumstances change such that we intend to spray apply target HAP containing coatings in surface coating operations, we will submit the initial notification required by 40 CFR §63.11175 and will comply with the requirements of 40 CFR Part 63 Subpart HHHHHH (the National Emission Standard for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources). Spray application of target HAP containing coatings in a surface coating operation voids any exemption that might be granted as a result of this petition.

If your petition is approved, then you must keep a copy of the approval on site at your facility until you change your operation(s) to include spray application of target HAP containing coatings, or discontinue motor vehicle and mobile equipment surface coating operations.

Signature of Certifying Official

8/25/16

Date

_X_ *Owner* ___ *Operator* *Certifying official must be the owner or operator of the facility. Check one or both that apply.*

Chad Shamblin, General Manager 304-766-0300
Printed Name and Telephone Number of the Certifying Official

140 West 19th Street, Nitro, WV 25143
Mailing Address of the Certifying Official

Attachment E

Plot Plan

The Plot Plan is contained on the following page.

NOTES:

1. THE PHYSICAL ADDRESS OF THE SUBJECT PROPERTY IS:
   4305 1ST AVENUE
   NITRO, WV 25143
2. THE BUILDINGS ON THE SUBJECT PROPERTY ARE GRAPHICALLY LOCATED IN ZONE "X", AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP NUMBER 54079C0254D, BEARING AN EFFECTIVE DATE OF 2/02/2012.
3. THERE IS NO PARKING STRIPING ON THE SUBJECT PROPERTY, HOWEVER, THERE IS A SPACE FOR HANDICAP PARKING, WHICH IS MARKED WITH SIGNAGE.
4. NO EVIDENCE WAS OBSERVED DURING THE COURSE OF THIS SURVEY THAT WOULD INDICATE THE SITE IS BEING USED AS A SOLID WASTE DUMP OR SANITARY LANDFILL.
5. NO EVIDENCE OF CURRENT EARTHMOVING OR BUILDING CONSTRUCTION WAS OBSERVED AT THE SITE DURING THE COURSE OF THIS SURVEY.
6. EXISTING UNDERGROUND UTILITIES SHOWN HEREON REPRESENT THOSE MARKED BY MISS UTILITY OF WEST VIRGINIA. ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN.
7. THE SUBJECT PROPERTY IS NOT SUBJECT TO ZONING REQUIREMENTS.

WEST VIRGINIA STATE PLANE COORDINATE SYSTEM
W.V. SOUTH ZONE

LEGAL DESCRIPTION:

THE FOLLOWING DESCRIBED LAND AND PREMISES, SITUATE IN POCATALICO DISTRICT, PUTNAM COUNTY, WEST VIRGINIA, AND KNOWN AND DESCRIBED AS FOLLOWS:

BEGINNING AT A 5/8" REBAR AND CAP FOUND IN THE NORTHERLY RIGHT OF WAY LINE OF NORFOLK AND SOUTHERN RAILWAY, COMMON CORNER TO KONIG RESOURCES (DB: 381 PG 297); THENCE LEAVING SAID KONIG RESOURCES, AND WITH THE NORTHERN RIGHT OF WAY LINE OF SAID RAILROAD, WITH A CURVE TO THE LEFT, HAVING AN ARC LENGTH OF 266.68' A RADIUS OF 5,812.58', AND CHORD BEARING AND DISTANCE OF S. 34°09'20" W. 266.65' TO A 5/8" REBAR AND CAP FOUND, SAID POINT MARKING THE NORTHERLY LINE OF A NEW 24' WIDE COMMON ACCESS AND UTILITY EASEMENT; THENCE LEAVING SAID RAILROAD AND WITH SAID NEW 24' WIDE EASEMENT WITH A NEW LINE THROUGH THE LANDS OF ITC DEVELOPMENT COMPANY, INC.: N. 58°10'39" W. 250.09' TO A 5/8" REBAR AND CAP FOUND; THENCE CONTINUING THROUGH SAID ITC DEVELOPMENT COMPANY, INC. FOR THE FOLLOWING TWO COURSES AND DISTANCES: S. 30°17'51" W. 166.54' TO A 5/8" REBAR AND CAP FOUND (DISTURBED); N. 58°14'12" W., 254.94' TO A 5/8" REBAR AND CAP FOUND IN THE LINE OF THE CITY OF NITRO (DB: 136 PG 370); THENCE WITH THE COMMON LINE OF THE CITY OF NITRO, WITH A CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 582.58' A RADIUS OF 6,312.58', AND CHORD BEARING AND DISTANCE OF N. 33°53'28" E. 582.37' TO AN INACCESSIBLE POINT; N. 47°57'00" W. 37.35' TO AN INACCESSIBLE POINT ON THE BANK OF KANAWHA RIVER; THENCE N. 60°13'00" E. 109.10' TO AN INACCESSIBLE POINT, COMMON CORNER TO AFOREMENTIONED KONIG RESOURCES; THENCE WITH THE COMMON LINE OF KONIG RESOURCES FOR THE FOLLOWING TWO COURSES AND DISTANCES: S. 25° 32'20" E., PASSING A 5/8" REBAR AND CAP FOUND AT 64.04', IN ALL 314.04' TO A 5/8" REBAR AND CAP FOUND; THENCE S. 36°54' 56" E., PASSING A 5/8"REBAR AND CAP FOUND AT 111.11', IN ALL 226.26' TO THE PLACE OF BEGINNING, CONTAINING 5.37 ACRES, MORE OR LESS.

FIRST AMERICAN TITLE INSURANCE COMPANY
SCHEDULE B-2
EFFECTIVE DATE: 06/30/2015
SURVEYOR RESPONSES IN RED

11. A RIGHT OF WAY TO WV STATE ROAD COMMISSION DATED DECEMBER 10, 1962 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 147, AT PAGE 372. AMBIGUOUS-THE PLAN SHEET REFERENCED IN THE DOCUMENT WAS NOT PROVIDED.

12. AN EASEMENT FOR AN ENCROACHMENT DATED SEPTEMBER 1, 1964 TO VIMASCO CORP. RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 154, AT PAGE 441. DOES NOT AFFECT THE SUBJECT PROPERTY.

13. RIGHT OF WAY TO APPALACHIAN POWER COMPANY DATED MAY 16, 1977 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 224, AT PAGE 282. DOES NOT AFFECT THE SUBJECT PROPERTY.

16. AN OVERFLOW EASEMENT TO USA DATED FEBRUARY 26, 1938 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 68, AT PAGE 465. AFFECTS THE SUBJECT PROPERTY-SHOWN ON SURVEY.

17. AN OVERFLOW EASEMENT TO USA DATED FEBRUARY 26, 1938 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 68, AT PAGE 438. AFFECTS THE SUBJECT PROPERTY-SHOWN ON SURVEY.

18. A STATE ROAD RIGHT OF WAY RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 78, AT PAGE 177.

20. RIGHT OF WAY TO WV AMERICAN WATER COMPANY DATED JANUARY 18, 2000 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 407, AT PAGE 647. AFFECTS THE SUBJECT PROPERTY, BUT AMBIGUOUS AS TO THE EXACT LOCATION OF THE EASEMENT.

21. RIGHT OF WAY TO APPALACHIAN POWER COMPANY DATED JANUARY 29, 1999 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 399, AT PAGE 454. AMBIGUOUS-APPALACHIAN POWER COMPANY DRAWING REFERENCED IN THE DOCUMENT WAS NOT PROVIDED.

23. RIGHT OF WAY TO APPALACHIAN POWER COMPANY DATED FEBRUARY 21, 2002 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 426, AT PAGE 829. AFFECTS THE SUBJECT PROPERTY, BUT IS AMBIGUOUS. ONE OF THE TWO UTILITY POLES REFERENCED IN THE DOCUMENT IS LOCATED ON THE SUBJECT PROPERTY. THE OTHER POLE WAS NOT IDENTIFIED ON OR NEAR THE SUBJECT PROPERTY.

24. A 20' RIGHT OF WAY TO KONIG RESOURCES, LLC DATED JANUARY 18, 2000 RECORDED IN THE AFORESAID CLERK'S OFFICE IN BOOK 407, AT PAGE 651. AFFECTS THE SUBJECT PROPERTY-SHOWN ON SURVEY.

25. THOSE EXCEPTIONS, RESERVATIONS, EASEMENTS, TERMS, CONDITIONS, STIPULATIONS, COVENANTS, RIGHTS OF OTHERS, INDEMNIFICATIONS, RESTRICTIONS, DUTIES OR OBLIGATIONS MORE FULLY SET FORTH IN A DEED FROM KONIG RESOURCES, L.L.C., TO ITC DEVELOPMENT, INC., BY A DEED DATED AUGUST 28, 1997, AND RECORDED IN THE CLERK'S OFFICE IN DEED BOOK 388, AT PAGE 32, AS MODIFIED BY DEED DATED JANUARY 18, 2000, AND RECORDED IN THE CLERK'S OFFICE IN DEED BOOK 408, AT PAGE 76, AND IN THAT DEED DATED APRIL 2, 1997, BY MIDWEST CORPORATION TO KONIG RESOURCES L.L.C., AND RECORDED IN THE CLERK'S OFFICE IN DEED BOOK 381, AT PAGE 297. AFFECTS THE SUBJECT PROPERTY-BLANKET EASEMENT.

26. THE NON-EXCLUSIVE RIGHTS OF OTHERS, RESERVATIONS, CONDITIONS IN AND TO THE NEW 24' WIDE COMMON ACCESS, THIS RIGHT OF WAY AND EASEMENT IS DESIGNATED AS "NEW 24' WIDE COMMON ACCESS & UTILITY EASEMENT," AS SHOWN ON THE PLAT ENTITLED "REVISED PLAT OF SURVEY FOR: ITC DEVELOPMENT CO., INC. SHOWING THE DIVISION OF A 10.04 ACRE TRACT POCATALICO DISTRICT, PUTNAM COUNTY, WV," DATED OCTOBER 1, 2010, PREPARED BY TERRADON CORPORATION, AND RECORDED IN THE CLERK'S OFFICE IN MAP BOOK E, AT PAGE 71. AFFECTS THE SUBJECT PROPERTY-LOCATION SHOWN ON SURVEY.

27. A PLAT SHOWING 5.37 ACRES, MORE OR LESS AS SHOWN ON THAT CERTAIN MAP OR PLAT ENTITLED, "REVISED PLAT OF SURVEY FOR: ITC DEVELOPMENT CO., INC., SHOWING THE DIVISION OF A 10.04 ACRE TRACT POCATALICO DISTRICT, PUTNAM COUNTY, WV", PREPARED BY TERRADON CORPORATION, DATED OCTOBER 1, 2010, AND RECORDED IN THE OFFICE OF THE CLERK OF THE COUNTY COMMISSION OF PUTNAM COUNTY, WEST VIRGINIA IN MAP CABINET E AT SLIDE 71, DATED MARCH 28, 2014, PREPARED BY TERRADON CORPORATION OF RECORD IN THE AFORESAID CLERK'S OFFICE IN MAP CABINET _____, PAGE _____. THIS IS A CORRECTIVE PLAT FOR THE ITC SUBDIVISION INFORMATION ON THIS PLAT SUPERSEDES THE PLATS RECORDED AT THE FOLLOWING LOCATIONS: MAP CABINET "E", PAGE 70; MAP CABINET "E", PAGE 71; MAP CABINET "E", PAGE 77. PLAT INDICATES A GAS LINE EASEMENT AND A WATER LINE, SANITARY EASEMENT, TELEPHONE LINE, ELECTRIC LINE, A 40' ROAD & UTILITY RIGHT-OF-WAY, A 20' UTILITY EASEMENT, AND A 24' COMMON ACCESS UTILITY EASEMENT AS SHOWN ON THE SURVEY. AFFECTS THE SUBJECT PROPERTY.

28. THOSE EXCEPTIONS, RESERVATIONS, EASEMENTS, TERMS, CONDITIONS, STIPULATIONS, COVENANTS, RIGHTS OF OTHERS, INDEMNIFICATIONS, RESTRICTIONS, DUTIES OR OBLIGATIONS MORE FULLY SET FORTH IN A DEED FROM ITC DEVELOPMENT, INC., TO TRITON PROPERTIES LLC BY A DEED DATED OCTOBER 8, 2010, AND RECORDED IN THE CLERK'S OFFICE IN DEED BOOK 501, AT PAGE 302. AFFECTS THE SUBJECT PROPERTY- (BLANKET EASEMENT).

SURVEYOR CERTIFICATION

TO BAILEY & SLOTNICK, PLLC, TRITON PROPERTIES, LLC, 4305 FIRST AVENUE (WV), LLC, ALL ERECTION & CRANE RENTAL CORP., FIRST AMERICAN TITLE INSURANCE COMPANY, IT'S SUCCESSORS AND ASSIGNS:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1,2,3,4,6(a), 7(a), 8, 9,13,16,18,20(a) OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JULY 17TH, 2015.

ROBERT F. THAW, P.S. NO. 965 DATE

CITY OF NITRO
NITRO CORP. TM: 8 PAR: 1
DB.136 PG.370

KANAWHA RIVER
NORMAL POOL 566.00 (NGVD 29)
100 YR. FLOOD EL.584.6 (NGVD 29)

ZONE AE
ZONE X

L=340.14', R=6312.58'
CH=S29° 42' 13"W 340.10'

L=582.58', R=6312.58'
CH=N33° 53' 28"E 582.37'

5/8" REBAR & CAP FOUND (GUNNOE)

EXCEPTION # 23
UTILITY POLE
65B 319

UTILITY POLE
65B 601

UTILITY POLE
65B 687

EXCEPTION # 24
20' WIDE UTILITY EASEMENT
KONIG RESOURCES
DB 407 PG 851

EXCEPTION # 15 & #16
U.S.A. FLOWAGE EASEMENT
DB 68 PG 465
DB 68 PG 426

5.37 ACRES
TRITON PROPERTIES L.L.C.
TM: 226 PAR: 114.1
DB: 501 PG: 302

METAL BUILDING
65.3'
65.1'
200.3'
59.6'
60.3'
100.1'

CONCRETE

5/8" REBAR & CAP FOUND (TERRADON)

TOP OF BANK
(1540.60')

N60° 14' 12"W
254.94'

80.8'

20'

DASHED LINES REPRESENT UNDERGROUND UTILITY LOCATIONS PROVIDED BY THE OWNER OR OWNER'S AGENT (SURVEYED BY OTHERS)

4.67 ACRES
ITC DEVELOPMENT CO. INC.
DB: 385 PG: 32
TM: 226 PAR: 114.2

5/8" REBAR & CAP FOUND DISTURBED(GUNNOE)

5/8" REBAR & CAP FOUND (GUNNOE)

UTILITY POLE
65B 688

N30° 17' 51"E
166.54'

GB-1E
GC-1
VC-1
PB-1E, PB-2E
HE-1E
HE-2E
HW-1E

42.3'
N58° 10' 39"W
250.09'

BROKEN ASPHALT

ASPHALT

TEAVEE OIL & GAS CO.
(APPROXIMATE LOCATION)

ITEM # 26
24' WIDE COMMON ACCESS & UTILITY EASEMENT
MB E PG 71

24'

L=474.94', R=5812.58'
CH=S30° 30' 01"W 474.80'

40' ROAD & UTILITY R/W

30'

450' +/- TO 1ST AVENUE WV SEC. RTE 25/30

53'

20' UTILITY EASEMENT
WV/AMERICAN COMPANY
DB: 428 PG: 283
(10' EACH SIDE OF WATER LINE)

33'

L=266.68', R=5812.58'
CH=S34° 09' 20"W 266.65'

R/W

NORFOLK AND SOUTHERN RAILWAY

15401+52

S25° 32' 20"E
314.04'

S36° 54' 56"E
111.11'

P.O.B.

30' WIDE RIGHT OF WAY- AS SHOWN ON A MAP PREPARED BY LOWE ENGINEERS DATED MAY 3, 1975.

KONIG RESOURCES
TM: 226 PAR: 114
DB: 381 PG: 297

LEGEND

	SURVEYED PROPERTY LINE
	ADJOINER PROPERTY LINE
	TRACT LINE
	RIGHT OF WAY
X	EXISTING FENCE LINE
W	EXISTING WATER LINE
SAN	EXISTING SANITARY SEWER
G	EXISTING GAS LINE
E	OVERHEAD ELECTRIC
	OVERHEAD CABLE
E&C	OVERHEAD ELECTRIC/CABLE
E,C&T	OVERHEAD ELECTRIC/CABLE/TELEPHONE
E&T	OVERHEAD ELECTRIC/TELEPHONE
C&T	OVERHEAD CABLE/TELEPHONE
	5/8" REBAR WITH CAP SET
	FOUND MONUMENTATION
	CALCULATED POINT
	UTILITY POLE/ LIGHT POLE
	UTILITY POLE/ LIGHT POLE
	UTILITY POLE/ LIGHT POLE

GRAPHIC SCALE
50 25 0 50
1 INCH = 50 FEET

NO.	DATE	REVISION
1	7-21-15	SUPPORTING DOCUMENT PROVIDED FOR ITEM 19 = DOES NOT AFFECT
2	7-23-15	UPDATE TO NOTES
3	7-30-15	UPDATED LEGAL AND CERTIFICATION PARTY
4	8-04-15	UPDATED UNDERGROUND UTILITIES

TERRADON CORPORATION
Engineering • Surveying • Landscape Architecture
Nitro, West Virginia 25143
(304) 755–8291 FAX 755–2636
www.terradon.com

A.L.T.A. / ACSM SURVEY
SHOWING A 5.37 ACRE PARCEL

POCATALICO DISTRICT
PUTNAM COUNTY, WEST VIRGINIA

Project No.	XXXXXXX
Drawn:	DAB
Checked:	RFT
Approved:	RFT
Scale:	1"=50'
Date:	7–30–15
CAD I'LE#	ALTA 7–15–15.DWG

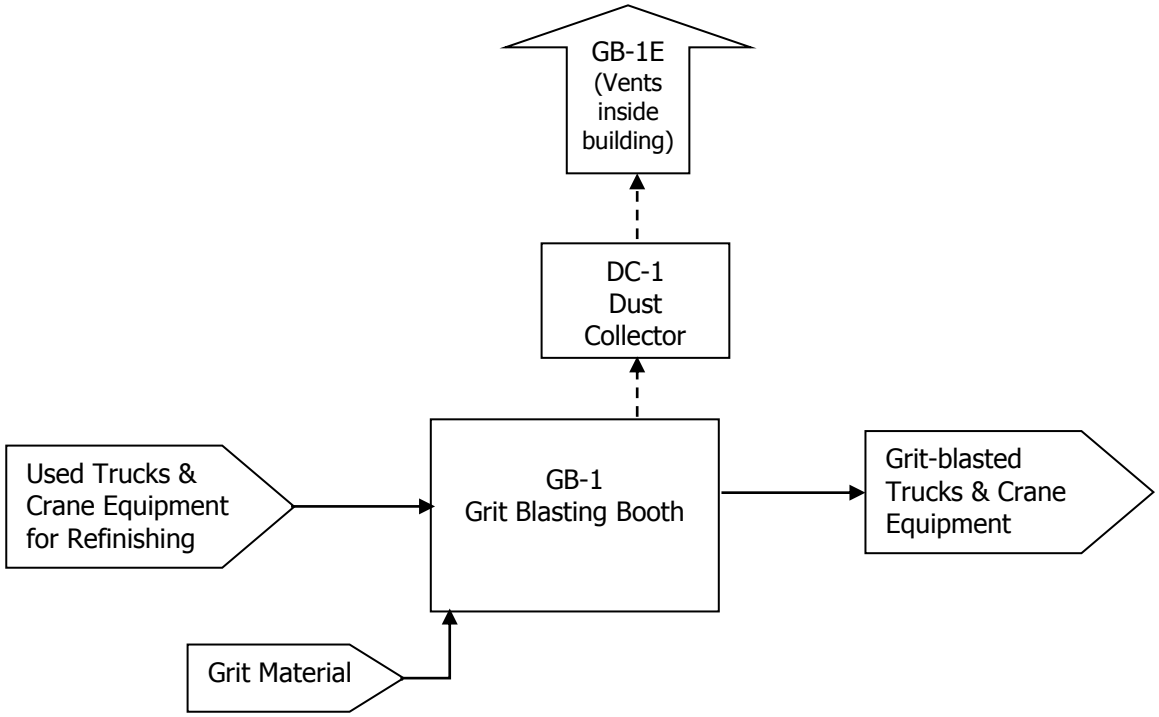
01

Attachment F

Process Flow Diagrams

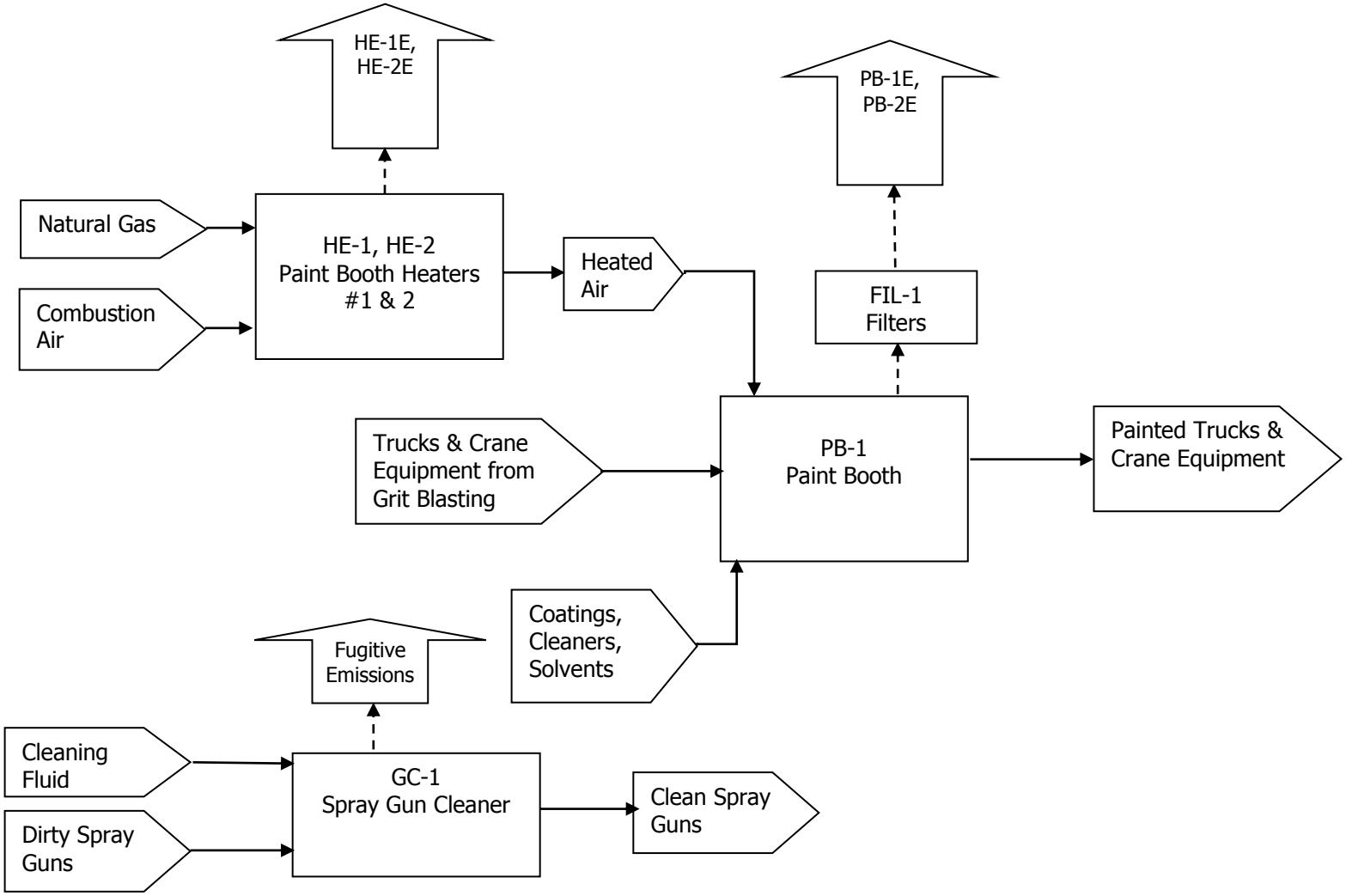
ATTACHMENT F – PROCESS FLOW DIAGRAM

Figure 1 – Grit Booth



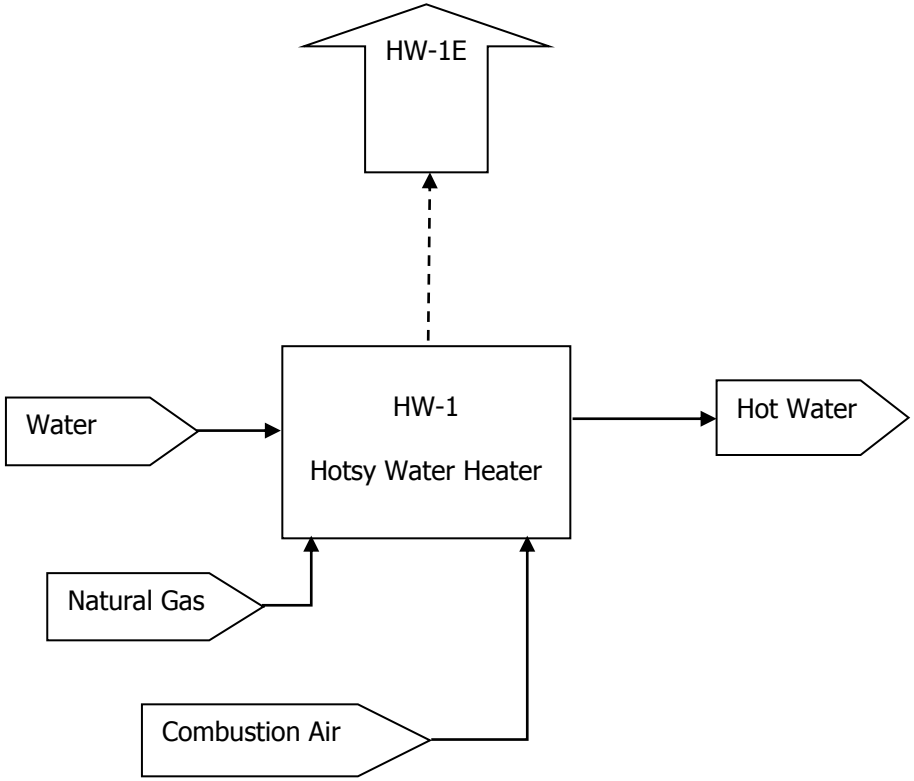
ATTACHMENT F – PROCESS FLOW DIAGRAM

Figure 2 – Paint Booth



ATTACHMENT F – PROCESS FLOW DIAGRAM

Figure 3 – Hotsy Water Heater



ATTACHMENT G – PROCESS DESCRIPTION

4305 First Avenue (WV), LLC is requesting that the Division of Air Quality (DAQ) grant a Rule 13 construction permit for the planned new maintenance operations at the existing Nitro Annex, located at 4301 1st Avenue in Nitro, Putnam County, at UTM Zone 17 coordinates 4,255.775 km N, and 427.547 km E.

This facility is eligible for a Rule 13 Permit because it meets the definition criteria of a "Stationary source" per 45CSR13, Section 2.24., and will not be a "Major stationary source" per 45CSR14, Section 2.43.

The Nitro Annex provides a local West Virginia-based maintenance facility for truck, trailer and crane equipment. 4305 First Avenue (WV), LLC proposes to add a grit blasting booth, a paint spray booth, and a vehicle wash bay to the facility. The Nitro Annex currently provides welding and vehicle mechanical repair services for truck, trailer and crane equipment. 4305 First Avenue (WV), LLC believes that the fugitive emissions of air pollutants from its current welding maintenance activities and the current truck repair activities are trivial. The current truck repair activity does include two small closed-top parts washing machines.

A Site Location Map of the Nitro Annex can be found in Attachment B. A drawing of the Nitro Annex can be found on the Plot Plan in Attachment E.

Driving directions to the site are as follows:

From Interstate 64 driving west from Charleston, take the Nitro exit (Exit 45). At the bottom of the exit ramp, drive straight across State Route 25 to 1st Avenue. Turn right on 1st Avenue and proceed 0.3 mile to the facility on the left.

The purpose of this air permit application is to construct and operate the following emission units:

1. Add Paint Booth (PB-1), controlled by overspray filters (FIL-1). The paint spraying operation will be low volume for maintenance painting of truck, trailer or crane components. The paint is applied manually via hand-held spray gun.

2. Add Paint Booth Heaters #1 & #2 (HE-1 & HE-2), which will combust natural gas in order to provide heated drying air for Paint Booth (PB-1). Each heater is rated at 4.0 MMBtu/hr design heat input.

3. Add Automatic Spray Gun Cleaner (GC-1), a small, closed-top cleaning machine for the spray guns used in Paint Booth (PB-1).

4. Add Grit Blasting Booth (GB-1), controlled by dust collector (DC-1). The grit blasting operation will be low volume for maintenance activities, and will be performed prior to spray painting the truck, trailer or crane components in Paint Booth (PB-1).

5. Add Hotsy Water Heater (HW-1) for the Hotsy vehicle washing system. The water heater will combust natural gas and is rated at 0.6 MMBtu/hr design heat input.

The emission units and vent points included at the facility are listed in Attachment I Emission Units Table. Process flow diagrams for the emission units contained at the Nitro Annex can be found in Attachment F.

Start-up of the emission units at the Nitro Annex is planned to commence soon after issuance of the Rule 13 air permit.

Attachment H

Material Safety Data Sheets

Manufacturer	Product Name (Product Code)	#Pages in MSDS
Axalta	Low VOC Epoxy Primer - Black (825P28300)	13
Axalta	Epoxy Primer - Gray (825P30020)	13
Axalta	Activator - Slow (937S)	11
Axalta	Activator - Extra Slow (948S)	11
Axalta	Imron - Elite Manitowoc Red (851678EX)	11
Axalta	Medium Temperature Activator - Imron (15305S)	11
ChemSpec USA, Inc.	Acrylic Urethane Clear (CRV22)	8
ChemSpec USA, Inc.	Activator (CR22AM)	11
Grow Automotive/PPG	KEY81 Urethane Reducer Medium (1370)	8
3M	Golden Extra Body Filler (01127, 01177, 01277, 01317, 31177)	14
PPG Industries, Inc.	Wax And Grease Remover (DX330)	5
Grow Automotive/PPG	Wax, Grease, Silicone Remover (GRO-1705-5 / ADV-193)	4
Eastman Chemical Co	Methyl Amyl Ketone (00133-00)	11
Superior	Super 16 Paint Gun Cleaner (0300585)	10

1. Identification of the substance/mixture and of the company/undertaking

Product name	Low VOC Epoxy Primer - Black	
Product code	825P28300	Formula date: 2015-02-17
Perm code	Not Available	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Bank Boulevard, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitisation	Category 1
Carcinogenicity	Category 2
Toxicity for reproduction	Category 2
Target Organ Systemic Toxicant - Single exposure	Category 3

Endpoints which are “not classified”, “cannot classified” and “not applicable” are not shown.

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements

Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.

Take precautionary measures against static discharge.
Avoid breathing dust/ vapours/ spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical name	Concentration	GHS Hazardous
79-20-9	Methyl acetate	15 - 26%	√
1317-65-3	Limestone (calcium carbonate)	10 - 20%	
No information available.	Acrylic polymer	5 - 10%	
7727-43-7	Barium sulfate	5 - 10%	
14807-96-6	Hydrous magnesium silicate	5 - 10%	
25036-25-3	Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	4 - 15%	√
25068-38-6	Bisphenol-epichlorohydrin type polymer	4 - 15%	√
110-12-3	Methyl isoamyl ketone	4 - 15%	√
71-36-3	N-butyl alcohol	3%	√
7779-90-0	Zinc phosphate	3%	√
1330-20-7	Xylene	2%	√
103-09-3	2-ethylhexyl acetate	1 - 4%	√
67-64-1	Acetone	1 - 4%	√

CAS-No.	Chemical name	Concentration	GHS Hazardous
64742-94-5	Aromatic hydrocarbon	1 - 4%	√
13983-17-0	Wollastonite	1 - 4%	√
1314-13-2	Zinc oxide	1%	√
1333-86-4	Carbon black	1.0%	
100-41-4	Ethylbenzene	0.6%	√
91-20-3	Naphthalene	0.3%	√
69-72-7	Salicylic acid	0.0 - 1.0%	√

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this safety data sheet (SDS) or product label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media

Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in “Composition, Information on Ingredients” section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self-contained breathing apparatus for firefighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 49 °C (120 °F). If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation.This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical name	Source	Time	Type	Value	Note
79-20-9	Methyl acetate	ACGIH	15 min	STEL	250 ppm	
		ACGIH	8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
1317-65-3	Limestone (calcium carbonate)	ACGIH	8 hr	TWA	10 mg/m3	
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
7727-43-7	Barium sulfate	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	5 mg/m3	Respirable Dust
14807-96-6	Hydrous magnesium silicate	Dupont	8 & 12 hour	TWA	0.5 mg/m3	Respirable Dust
25036-25-3	Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	ACGIH	8 hr	TWA	10 mg/m3	Total Dust
		ACGIH	8 hr	TWA	5 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
71-36-3	N-butyl alcohol	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	15 min	TWA	50 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	
7779-90-0	Zinc phosphate	OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
1330-20-7	Xylene	ACGIH	15 min	STEL	150 ppm	
		ACGIH	8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	100 ppm	
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
		ACGIH	8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
64742-94-5	Aromatic hydrocarbon	Dupont	8 & 12 hour	TWA	100 ppm	

CAS-No.	Chemical name	Source	Time	Type	Value	Note
1314-13-2	Zinc oxide	ACGIH	15 min	STEL	10 mg/m3	Respirable Dust
		ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
1333-86-4	Carbon black	ACGIH	8 hr	TWA	3 mg/m3	
		OSHA	8 hr	TWA	3.5 mg/m3	
		Dupont	8 & 12 hour	TWA	0.5 mg/m3	
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	
91-20-3	Naphthalene	ACGIH		CEIL	15 ppm	Skin
		ACGIH	8 hr	TWA	10 ppm	Skin
		OSHA	8 hr	TWA	10 ppm	
		Dupont	8 & 12 hour	TWA	0.1 ppm	
69-72-7	Salicylic acid	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
-	-					

STEL	Short term exposure limit.
TWA	Time-weighted average.
CEIL	Ceiling.

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains.
For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid **Colour:** black

Flash point	30 °F	
Lower Explosive Limit	1 %	
Upper Explosive Limit	16 %	
Evaporation rate	Slower than Ether	
Vapor pressure of principal solvent	39.6 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	2.6	
Approx. Boiling Range	55 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	10.46	
Specific Gravity	1.25	
Percent Volatile By Volume	59.07%	
Percent Volatile By Weight	40.92%	
Percent Solids By Volume	40.93%	
Percent Solids By Weight	59.08%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	No data available	
Ignition temperature	268 °C	DIN 51794
Decomposition temperature	Not applicable.	
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.2	
VOC* as packaged (lbs/gal)	2.5	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7).

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition: 0 %

Skin corrosion/irritation

Methyl acetate	Category 3
Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	Category 2
Bisphenol-epichlorohydrin type polymer	Category 2
Methyl isoamyl ketone	Category 3
N-butyl alcohol	Category 2
Xylene	Category 2
2-ethylhexyl acetate	Category 2
Acetone	Category 3
Aromatic hydrocarbon	Category 3
Wollastonite	Category 3

Serious eye damage/eye irritation

Methyl acetate	Category 2A
Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	Category 2A
Bisphenol-epichlorohydrin type polymer	Category 2A
Methyl isoamyl ketone	Category 2A
N-butyl alcohol	Category 1
Xylene	Category 2A
2-ethylhexyl acetate	Category 2B
Acetone	Category 2A
Wollastonite	Category 2B
Salicylic acid	Category 1

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation

Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	Category 1
Bisphenol-epichlorohydrin type polymer	Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity

Naphthalene	Category 2

Toxicity for reproduction

Salicylic acid	Category 2

Target Organ Systemic Toxicant - Single exposure

- **Skin Absorption**

  Liver Salicylic acid

- **Inhalation**

  Respiratory system Methyl acetate

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Based on the properties of the epoxy constituent(s) and considering toxicological data on similar preparations, this preparation may be a skin sensitiser and an irritant. Low molecular epoxy constituents are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Avoid skin and eye contact. Avoid inhalation of vapour or mist.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Carbon black	IARC 2B
Ethylbenzene	IARC 2B
Naphthalene	IARC 2B
Naphthalene	NTP Anticipated

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [trizinc bis(orthophosphate)]
EmS:	F-E,S-E

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [trizinc bis(orthophosphate)]

The transport information is for bulk shipments. Exceptions may apply for smaller containers.

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING: This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311/312	313	RQ(lbs)	HAP
79-20-9	Methyl acetate	N	NR	NR	A,C,F,N,P,R	N	100	N
1317-65-3	Limestone (calcium carbonate)	N	NR	NR	A,C,F,N,P,R	N	NR	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
7727-43-7	Barium sulfate	N	NR	NR	A,C,F,N,P,R	N	NR	N
14807-96-6	Hydrous magnesium silicate	N	NR	NR	A,C,F,N,P,R	N	NR	N

CAS #	Ingredient	EPCRA 302	EPCRA TPQ	EPCRA RQ	EPCRA 311/312	EPCRA 313	CERCLA RQ(lbs)	CAA HAP
25036-25-3	Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	N	NR	NR	A,C,F,N,P,R	N	NR	N
25068-38-6	Bisphenol-epichlorohydrin type polymer	N	NR	NR	A,C,F,N,P,R	N	NR	N
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
71-36-3	N-butyl alcohol	N	NR	NR	A,C,F	Y	5,000	N
7779-90-0	Zinc phosphate	N	NR	NR	A,C,F,N,P,R	Y	NR	N
1330-20-7	Xylene	N	NR	NR	A,C,F,N,P,R	Y	100	Y
103-09-3	2-ethylhexyl acetate	N	NR	NR	A,F	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
64742-94-5	Aromatic hydrocarbon	N	NR	NR	A,C,F,N,P,R	N	NR	N
13983-17-0	Wollastonite	N	NR	NR	A,C,F,N,P,R	N	NR	N
1314-13-2	Zinc oxide	N	NR	NR	A,C,F,N,P,R	Y	1,000	N
1333-86-4	Carbon black	N	NR	NR	C	N	NR	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y
91-20-3	Naphthalene	N	NR	NR	A,C,F	Y	100	Y
69-72-7	Salicylic acid	N	NR	NR	A,C,F,N,P,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems :
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use.
The information on this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SDS prepared by: Axalta Coating Systems Regulatory Affairs

Report version

Version	Changes
1.0	

Revision Date: 2016-08-04

(855) 6-AXALTA
axalta.us

1. Identification of the substance/mixture and of the company/undertaking

Product name	Epoxy Primer - Gray	
Product code	825P30020	Formula date: 2015-01-20
Perm code	Not Available	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Bank Boulevard, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitisation	Category 1
Toxicity for reproduction	Category 2

Endpoints which are “not classified”, “cannot classified” and “not applicable” are not shown.

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements

Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of damaging fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ vapours/ spray.
Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Immediately call a POISON CENTER/doctor.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical name	Concentration	GHS Hazardous
7727-43-7	Barium sulfate	10 - 20%	
14807-96-6	Hydrous magnesium silicate	10 - 20%	
13463-67-7	Titanium dioxide	9.8%	
1332-58-7	Kaolin	5 - 10%	
1317-65-3	Limestone (calcium carbonate)	5 - 10%	
67-64-1	Acetone	4 - 15%	√
64742-95-6	Aromatic hydrocarbon	4 - 15%	√
25036-25-3	Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	4 - 15%	√
25068-38-6	Bisphenol-epichlorohydrin type polymer	4 - 15%	√
110-12-3	Methyl isoamyl ketone	4 - 15%	√
71-36-3	N-butyl alcohol	4%	√
95-63-6	1,2,4-trimethyl benzene	3%	√
1330-20-7	Xylene	2%	√
7779-90-0	Zinc phosphate	2%	√
No information available.	Acrylic polymer	1 - 5%	

CAS-No.	Chemical name	Concentration	GHS Hazardous
13983-17-0	Wollastonite	1 - 4%	√
100-41-4	Ethylbenzene	0.4%	√
98-82-8	Cumene	0.1%	√
69-72-7	Salicylic acid	0.0 - 1.0%	√

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this safety data sheet (SDS) or product label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products

CO, CO2, smoke, and oxides of any heavy metals that are reported in “Composition, Information on Ingredients” section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self-contained breathing apparatus for firefighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 49 °C (120 °F). If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices

Provide adequate ventilation.This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical name	Source	Time	Type	Value	Note
7727-43-7	Barium sulfate	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	5 mg/m3	Respirable Dust
14807-96-6	Hydrous magnesium silicate	Dupont	8 & 12 hour	TWA	0.5 mg/m3	Respirable Dust
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	5 mg/m3	Respirable Dust
1332-58-7	Kaolin	ACGIH	8 hr	TWA	2 mg/m3	Respirable Dust
		OSHA		TWA	15 mg/m3	Total Dust
		OSHA		TWA	5 mg/m3	Respirable Dust
1317-65-3	Limestone (calcium carbonate)	ACGIH	8 hr	TWA	10 mg/m3	
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
		ACGIH	8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
64742-95-6	Aromatic hydrocarbon	Dupont	8 & 12 hour	TWA	50 ppm	
25036-25-3	Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	ACGIH	8 hr	TWA	10 mg/m3	Total Dust
		ACGIH	8 hr	TWA	5 mg/m3	Respirable Dust
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
71-36-3	N-butyl alcohol	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	15 min	TWA	50 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	
95-63-6	1,2,4-trimethyl benzene	ACGIH	8 hr	TWA	25 ppm	
		OSHA	8 hr	TWA	25 ppm	

CAS-No.	Chemical name	Source	Time	Type	Value	Note
1330-20-7	Xylene	ACGIH	15 min	STEL	150 ppm	
		ACGIH	8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	100 ppm	
7779-90-0	Zinc phosphate	OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	
98-82-8	Cumene	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	50 ppm	Skin
69-72-7	Salicylic acid	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
-	-					
TWA	Time-weighted average.					
STEL	Short term exposure limit.					

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains.
For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid **Colour:** grey

Flash point	28 °F
Lower Explosive Limit	0.9 %
Upper Explosive Limit	8.2 %

Evaporation rate	Slower than Ether	
Vapor pressure of principal solvent	15.0 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	4.1	
Approx. Boiling Range	56 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	12.28	
Specific Gravity	1.47	
Percent Volatile By Volume	49.18%	
Percent Volatile By Weight	27.88%	
Percent Solids By Volume	50.82%	
Percent Solids By Weight	72.12%	
pH (waterborne systems only)	Not applicable	
Partition coefficient: n-octanol/water	No data available	
Ignition temperature	301 °C	DIN 51794
Decomposition temperature	Not applicable.	
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.1	
VOC* as packaged (lbs/gal)	2.7	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7).

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition: 0 %

Skin corrosion/irritation

Acetone	Category 3
Aromatic hydrocarbon	Category 3
Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	Category 2
Bisphenol-epichlorohydrin type polymer	Category 2
Methyl isoamyl ketone	Category 3
N-butyl alcohol	Category 2
1,2,4-trimethyl benzene	Category 2
Xylene	Category 2
Wollastonite	Category 3

Serious eye damage/eye irritation

Acetone	Category 2A
Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	Category 2A
Bisphenol-epichlorohydrin type polymer	Category 2A
Methyl isoamyl ketone	Category 2A
N-butyl alcohol	Category 1
1,2,4-trimethyl benzene	Category 2A
Xylene	Category 2A

Wollastonite	Category 2B
Salicylic acid	Category 1

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation

Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	Category 1
Bisphenol-epichlorohydrin type polymer	Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction

Salicylic acid	Category 2

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Based on the properties of the epoxy constituent(s) and considering toxicological data on similar preparations, this preparation may be a skin sensitiser and an irritant. Low molecular epoxy constituents are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Avoid skin and eye contact. Avoid inhalation of vapour or mist.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide	IARC 2B
Ethylbenzene	IARC 2B
Cumene	IARC 2B
Titanium dioxide	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [epoxy resin (number average molecular weight <= 700)]
EmS:	F-E,S-E

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	yes [epoxy resin (number average molecular weight <= 700)]

The transport information is for bulk shipments. Exceptions may apply for smaller containers.

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING: This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311/312	313	RQ(lbs)	HAP
7727-43-7	Barium sulfate	N	NR	NR	A,C,F,N,P,R	N	NR	N
14807-96-6	Hydrous magnesium silicate	N	NR	NR	A,C,F,N,P,R	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	A,C,F,N,P,R	N	NR	N
1332-58-7	Kaolin	N	NR	NR	A,C,F,N,P,R	N	NR	N
1317-65-3	Limestone (calcium carbonate)	N	NR	NR	A,C,F,N,P,R	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
64742-95-6	Aromatic hydrocarbon	N	NR	NR	A,C,F,N,P,R	N	NR	N
25036-25-3	Bisphenol a/epichlorohydrin poly mn 700 -1200 g/mol	N	NR	NR	A,C,F,N,P,R	N	NR	N
25068-38-6	Bisphenol-epichlorohydrin type polymer	N	NR	NR	A,C,F,N,P,R	N	NR	N
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
71-36-3	N-butyl alcohol	N	NR	NR	A,C,F	Y	5,000	N
95-63-6	1,2,4-trimethyl benzene	N	NR	NR	A,C	Y	NR	N
1330-20-7	Xylene	N	NR	NR	A,C,F,N,P,R	Y	100	Y
7779-90-0	Zinc phosphate	N	NR	NR	A,C,F,N,P,R	Y	NR	N
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
13983-17-0	Wollastonite	N	NR	NR	A,C,F,N,P,R	N	NR	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y
98-82-8	Cumene	N	NR	NR	A,C,F	Y	NR	Y
69-72-7	Salicylic acid	N	NR	NR	A,C,F,N,P,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard A = Acute Hazard R = Reactivity Hazard C = Chronic Hazard P = Pressure Related Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems :
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use.
The information on this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SDS prepared by: Axalta Coating Systems Regulatory Affairs

Report version

Version	Changes
1.0	

Revision Date: 2016-08-04

(855) 6-AXALTA
axalta.us

B12953502

1. Identification of the substance/mixture and of the company/undertaking

Product name	Activator - Slow	
Product code	937S	Formula date: 2015-08-05
Perm code	Not Available	
Intended use	Hardener for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Bank Boulevard, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Target Organ Systemic Toxicant - Single exposure	Category 3
Target Organ Systemic Toxicant - Repeated exposure	Category 2

Endpoints which are “not classified”, “cannot classified” and “not applicable” are not shown.

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements

Highly flammable liquid and vapour.
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical name	Concentration
71-36-3	N-butyl alcohol	26%
1330-20-7	Xylene	7%
110-12-3	Methyl isoamyl ketone	4 - 15%
100-41-4	Ethylbenzene	1.8%
79-20-9	Methyl acetate	1 - 4%

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
Non-regulated ingredients 50 - 60%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion

If swallowed, seek medical advice immediately and show this safety data sheet (SDS) or product label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in “Composition, Information on Ingredients” section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self-contained breathing apparatus for firefighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 49 °C (120 °F). If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters

or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation.This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical name	Source	Time	Type	Value	Note
71-36-3	N-butyl alcohol	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	15 min	TWA	50 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	
1330-20-7	Xylene	ACGIH	15 min	STEL	150 ppm	
		ACGIH	8 hr	TWA	100 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	100 ppm	
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
100-41-4	Ethylbenzene	ACGIH	8 hr	TWA	20 ppm	
		OSHA	8 hr	TWA	100 ppm	
		Dupont	8 & 12 hour	TWA	25 ppm	
79-20-9	Methyl acetate	ACGIH	15 min	STEL	250 ppm	
		ACGIH	8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
-	-					
TWA	Time-weighted average.					
STEL	Short term exposure limit.					

Protective equipment

Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains.
For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid **Colour:** amber

Flash point	69 °F	
Lower Explosive Limit	1 %	
Upper Explosive Limit	11.3 %	
Evaporation rate	Slower than Ether	
Vapor pressure of principal solvent	6.8 hPa	
Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	2.6	
Approx. Boiling Range	117 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	7.64	
Specific Gravity	0.92	
Percent Volatile By Volume	50.11%	
Percent Volatile By Weight	45.18%	
Percent Solids By Volume	49.89%	
Percent Solids By Weight	54.83%	
pH (waterborne systems only)	Not applicable	
Partition coefficient: n-octanol/water	No data available	
Ignition temperature	340 °C	DIN 51794
Decomposition temperature	Not applicable.	
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.4	
VOC* as packaged (lbs/gal)	3.3	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7).

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
Not classified according to GHS criteria

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition: 0 %

Skin corrosion/irritation

N-butyl alcohol	Category 2
Xylene	Category 2
Methyl isoamyl ketone	Category 3
Methyl acetate	Category 3

Serious eye damage/eye irritation

N-butyl alcohol	Category 1
Xylene	Category 2A
Methyl isoamyl ketone	Category 2A
Methyl acetate	Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation
Not classified according to GHS criteria

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure

- **Inhalation**

  Respiratory system Methyl acetate

Target Organ Systemic Toxicant - Repeated exposure
No data available.

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Ethylbenzene IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-E

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II

DOT

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no

The transport information is for bulk shipments. Exceptions may apply for smaller containers.

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING: This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311/312	313	RQ(lbs)	HAP
71-36-3	N-butyl alcohol	N	NR	NR	A,C,F	Y	5,000	N
1330-20-7	Xylene	N	NR	NR	A,C,F,N,P,R	Y	100	Y
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
100-41-4	Ethylbenzene	N	NR	NR	A,C,F	Y	1,000	Y
79-20-9	Methyl acetate	N	NR	NR	A,C,F,N,P,R	N	100	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 3 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems :
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use.

The information on this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SDS prepared by: Axalta Coating Systems Regulatory Affairs

Report version

Version	Changes
4.0	3, 15

Revision Date: 2016-08-04

(855) 6-AXALTA
axalta.us

1. Identification of the substance/mixture and of the company/undertaking

Product name	Activator - Extra Slow	
Product code	948S	Formula date: 2015-10-19
Perm code	Not Available	
Intended use	Hardener for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Bank Boulevard, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitisation	Category 1
Carcinogenicity	Category 2

Endpoints which are “not classified”, “cannot classified” and “not applicable” are not shown.

GHS-Labelling

Hazard symbols

Signal word: Warning

Hazard statements

Flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of causing cancer.

Precautionary statements

Obtain special instructions before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ vapours/ spray.
Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical name	Concentration	GHS Hazardous
No information available.	Epoxy resin	50 - 60%	
111-76-2	Ethylene glycol monobutyl ether	19%	√
64742-94-5	Aromatic hydrocarbon	4 - 15%	√
110-12-3	Methyl isoamyl ketone	4 - 15%	√
90-72-2	2,4,6- tri((dimethylamino)methyl) phenol	1 - 4%	√
112-34-5	Ethanol, 2-(2-butoxyethoxy)-	1%	√
79-20-9	Methyl acetate	1 - 4%	√
1760-24-3	N-beta-(aminoethyl)-gamma-aminopropyltrimethoxysilane	1 - 4%	√
91-20-3	Naphthalene	0.7%	√
98-82-8	Cumene	0.2%	√

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
OSHA Hazardous: Yes

4. First aid measures

Eye contact

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this safety data sheet (SDS) or product label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in “Composition, Information on Ingredients” section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self-contained breathing apparatus for firefighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 49 °C (120 °F). If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IC

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation.This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical name	Source	Time	Type	Value	Note
111-76-2	Ethylene glycol monobutyl ether	OSHA	8 hr	TWA	50 ppm	Skin
		Dupont	8 & 12 hour	TWA	20 ppm	
64742-94-5	Aromatic hydrocarbon	Dupont	8 & 12 hour	TWA	100 ppm	
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
112-34-5	Ethanol, 2-(2-butoxyethoxy)-	ACGIH	8 hr	TWA	10 ppm	
		Dupont	8 hr	TWA	5 ppm	

CAS-No.	Chemical name	Source	Time	Type	Value	Note
79-20-9	Methyl acetate	ACGIH	15 min	STEL	250 ppm	
		ACGIH	8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
91-20-3	Naphthalene	ACGIH		CEIL	15 ppm	Skin
		ACGIH	8 hr	TWA	10 ppm	Skin
		OSHA	8 hr	TWA	10 ppm	
		Dupont	8 & 12 hour	TWA	0.1 ppm	
98-82-8	Cumene	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	50 ppm	Skin
-	-					
TWA	Time-weighted average.					
STEL	Short term exposure limit.					
CEIL	Ceiling.					

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains.
For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid **Colour:** amber

Flash point	85 °F
Lower Explosive Limit	0.6 %
Upper Explosive Limit	10.6 %
Evaporation rate	Slower than Ether
Vapor pressure of principal solvent	5.0 hPa
Water solubility	appreciable
Vapor density of principal solvent (Air = 1)	4.1
Approx. Boiling Range	144 °C
Approx. Freezing Range	Not applicable.
Gallon Weight (lbs/gal)	7.96

Specific Gravity	0.95	
Percent Volatile By Volume	40.95%	
Percent Volatile By Weight	37.80%	
Percent Solids By Volume	59.06%	
Percent Solids By Weight	62.20%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	No data available	
Ignition temperature	210 °C	DIN 51794
Decomposition temperature	Not applicable.	
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	2.9	
VOC* as packaged (lbs/gal)	2.9	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7).

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
Not classified according to GHS criteria

% of unknown composition: 0 %

Skin corrosion/irritation

Ethylene glycol monobutyl ether	Category 2
Aromatic hydrocarbon	Category 3
Methyl isoamyl ketone	Category 3
2,4,6- tri((dimethylamino)methyl) phenol	Category 2
Methyl acetate	Category 3

Serious eye damage/eye irritation

Ethylene glycol monobutyl ether	Category 2A
Methyl isoamyl ketone	Category 2A
2,4,6- tri((dimethylamino)methyl) phenol	Category 2A
Ethanol, 2-(2-butoxyethoxy)-	Category 2A
Methyl acetate	Category 2A
N-beta-(aminoethyl)-gamma-aminopropyltrimethoxysilane	Category 1

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation

N-beta-(aminoethyl)-gamma-aminopropyltrimethoxysilane Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity

Naphthalene Category 2

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Naphthalene	IARC 2B
Naphthalene	NTP Anticipated
Cumene	IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no
EmS:	F-E,S-E

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III

DOT

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	III
Marine Pollutant:	no

The transport information is for bulk shipments. Exceptions may apply for smaller containers.

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Photochemically reactive

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING: This product contains a chemical known to the State of California to cause cancer.

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311/312	313	RQ(lbs)	HAP
No information available.	Epoxy resin	N	NR	NR	NA	N	NR	N
111-76-2	Ethylene glycol monobutyl ether	N	NR	NR	A,C,F	Y	NR	N
64742-94-5	Aromatic hydrocarbon	N	NR	NR	A,C,F,N,P,R	N	NR	N
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
90-72-2	2,4,6-tri((dimethylamino)methyl) phenol	N	NR	NR	A,C,F,N,P,R	N	NR	N
112-34-5	Ethanol, 2-(2-butoxyethoxy)-	N	NR	NR	A,C,F,N,P,R	Y	NR	Y
79-20-9	Methyl acetate	N	NR	NR	A,C,F,N,P,R	N	100	N
1760-24-3	N-beta-(aminoethyl)-gamma-aminopropyltrimethoxysilane	N	NR	NR	A,C	N	NR	N
91-20-3	Naphthalene	N	NR	NR	A,C,F	Y	100	Y
98-82-8	Cumene	N	NR	NR	A,C,F	Y	NR	Y

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems :
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use.
The information on this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SDS prepared by: Axalta Coating Systems Regulatory Affairs

Report version

Version	Changes
3.0	2, 3, 5, 8, 9, 15

Revision Date: 2016-08-04

(855) 6-AXALTA
axalta.us

1. Identification of the substance/mixture and of the company/undertaking

Product name	Imron	
Product code	851678EX	Formula date:
Perm code	Not Available	
Intended use	Coating for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Bank Boulevard, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information	(855) 6-AXALTA
	Medical emergency	(855) 274-5698
	Transportation emergency	(800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin sensitisation	Category 1
Target Organ Systemic Toxicant - Single exposure	Category 3

Endpoints which are “not classified”, “cannot classified” and “not applicable” are not shown.

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements

Highly flammable liquid and vapour.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ vapours/ spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.

Specific treatment (see supplemental first aid instructions on this label).
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
8.9 %

3. Composition/information on ingredients

Mixture of synthetic resins, pigments, and solvents

Components

CAS-No.	Chemical name	Concentration	GHS Hazardous
No information available.	Acrylic polymer	20 - 30%	
123-86-4	Butyl acetate	15 - 26%	√
84632-65-5	C.i. pigment red 254	10 - 20%	
No information available.	Polyester resin	10 - 20%	
12236-62-3	Monoazo pigment	5 - 10%	
110-43-0	Methyl amyl ketone	4 - 15%	√
13463-67-7	Titanium dioxide	3.3%	
103-09-3	2-ethylhexyl acetate	1 - 4%	√
67-64-1	Acetone	1 - 4%	√
141-78-6	Ethyl acetate	1 - 4%	√
67-63-0	Isopropyl alcohol	1 - 4%	√
110-12-3	Methyl isoamyl ketone	1 - 4%	√
108-65-6	Propylene glycol monomethyl ether acetate	1 - 4%	√
41556-26-7	Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	0.0 - 1.0%	√

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this safety data sheet (SDS) or product label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in “Composition, Information on Ingredients” section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self-contained breathing apparatus for firefighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 49 °C (120 °F). If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation.This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

National occupational exposure limits

CAS-No.	Chemical name	Source	Time	Type	Value	Note
123-86-4	Butyl acetate	ACGIH	15 min	STEL	200 ppm	
		ACGIH	8 hr	TWA	150 ppm	
		OSHA	8 hr	TWA	150 ppm	
12236-62-3	Monoazo pigment	ACGIH	8 hr	TWA	10 mg/m3	
		OSHA	8 hr	TWA	15 mg/m3	Total Dust
		OSHA	8 hr	TWA	5 mg/m3	Respirable Dust
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	

CAS-No.	Chemical name	Source	Time	Type	Value	Note
13463-67-7	Titanium dioxide	OSHA	8 hr	TWA	15 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	10 mg/m3	Total Dust
		Dupont	8 & 12 hour	TWA	5 mg/m3	Respirable Dust
67-64-1	Acetone	ACGIH	15 min	STEL	750 ppm	
		ACGIH	8 hr	TWA	500 ppm	
		OSHA	8 hr	TWA	1,000 ppm	
		Dupont	8 & 12 hour	TWA	500 ppm	
141-78-6	Ethyl acetate	ACGIH	8 hr	TWA	400 ppm	
		OSHA	8 hr	TWA	400 ppm	
110-12-3	Methyl isoamyl ketone	ACGIH	8 hr	TWA	20 ppm	
108-65-6	Propylene glycol monomethyl ether acetate	Dupont	15 min	TWA	30 ppm	
-	-					
STEL	Short term exposure limit.					
TWA	Time-weighted average.					

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains.
For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid **Colour:**

Flash point	41 °F
Lower Explosive Limit	1.2 %
Upper Explosive Limit	7.5 %
Evaporation rate	Slower than Ether
Vapor pressure of principal solvent	16.3 hPa

Water solubility	moderate	
Vapor density of principal solvent (Air = 1)	4	
Approx. Boiling Range	125 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.86	
Specific Gravity	1.06	
Percent Volatile By Volume	51.06%	
Percent Volatile By Weight	41.21%	
Percent Solids By Volume	48.94%	
Percent Solids By Weight	58.79%	
pH (waterborne systems only)	Not applicable.	
Partition coefficient: n-octanol/water	No data available	
Ignition temperature	268 °C	DIN 51794
Decomposition temperature	Not applicable.	
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	3.5	
VOC* as packaged (lbs/gal)	3.3	
VOC LE (TBAC)	3.5	
VOC AP (TBAC)	3.3	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.
TBAC is not universally recognized as an exempt solvent.
Users should consult the applicable regulations for their region.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7).

Materials to avoid
None reasonably foreseeable.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
Not classified according to GHS criteria

Acute inhalation toxicity
not hazardous

% of unknown composition: 8.9 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation
Not classified according to GHS criteria

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation

Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure

- **Inhalation**

  airway sensitivity Methyl amyl ketone

  Narcotic effects Methyl amyl ketone

  Respiratory system Isopropyl alcohol, Propylene glycol monomethyl ether acetate

  reproductive organs Ethyl acetate

- **Ingestion**

  Respiratory tract irritation Methyl amyl ketone

  Narcotic effects Methyl amyl ketone

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

Titanium dioxide IARC 2B

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

The product contains an organic linked halogen. It may contribute to the AOX-value.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-E

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II

DOT

UN number:	1263
Proper shipping name:	PAINT
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no

The transport information is for bulk shipments. Exceptions may apply for smaller containers.

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity
Non-photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311/312	313	RQ(lbs)	HAP
No information available.	Acrylic polymer	N	NR	NR	NA	N	NR	N
123-86-4	Butyl acetate	N	NR	NR	A,C,F	N	NR	N
84632-65-5	C.i. pigment red 254	N	NR	NR	NA	N	NR	N
No information available.	Polyester resin	N	NR	NR	NA	N	NR	N
12236-62-3	Monoazo pigment	N	NR	NR	A,C,F,N,P,R	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
13463-67-7	Titanium dioxide	N	NR	NR	A,C,F,N,P,R	N	NR	N
103-09-3	2-ethylhexyl acetate	N	NR	NR	A,F	N	NR	N
67-64-1	Acetone	N	NR	NR	A,C,F	N	5,000	N
141-78-6	Ethyl acetate	N	NR	NR	C,F	N	NR	N
67-63-0	Isopropyl alcohol	N	NR	NR	A,C,F,N,P,R	N	NR	N
110-12-3	Methyl isoamyl ketone	N	NR	NR	C	N	NR	N
108-65-6	Propylene glycol monomethyl ether acetate	N	NR	NR	F	N	NR	N
41556-26-7	Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	N	NR	NR	A,C,F,N,P,R	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard R = Reactivity Hazard P = Pressure Related Hazard A = Acute Hazard C = Chronic Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 2 F: 3 R: 0

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems :
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use.
The information on this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SDS prepared by: Axalta Coating Systems Regulatory Affairs

Report version

Version	Changes
1.0	

Revision Date: 2016-08-04

(855) 6-AXALTA
axalta.us

1. Identification of the substance/mixture and of the company/undertaking

Product name	Medium Temperature Activator	
Product code	15305S	Formula date: 2012-05-24
Perm code	Not Available	
Intended use	Hardener for professional use	
	Axalta Coating Systems, LLC Applied Corporate Center 50 Applied Bank Boulevard, Suite 300 US Glen Mills, PA 19342	
Telephone	Product information Medical emergency Transportation emergency	(855) 6-AXALTA (855) 274-5698 (800) 424-9300 (CHEMTREC)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitisation	Category 1
Target Organ Systemic Toxicant - Single exposure	Category 3

Endpoints which are “not classified”, “cannot classified” and “not applicable” are not shown.

GHS-Labelling

Hazard symbols

Signal word: Danger

Hazard statements

Highly flammable liquid and vapour.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ vapours/ spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Other hazards which do not result in classification
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
0 %

3. Composition/information on ingredients

Mixture of synthetic resins and solvents

Components

CAS-No.	Chemical name	Concentration
28182-81-2	Aliphatic polyisocyanate resin	59 - 70%
79-20-9	Methyl acetate	15 - 26%
108-83-8	Diisobutyl ketone	4 - 15%
110-43-0	Methyl amyl ketone	4 - 15%
19549-80-5	4,6-dimethyl-2-heptanone	1 - 4%

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
Non-regulated ingredients 0.1 - 1.0%
OSHA Hazardous: Yes

4. First aid measures

Eye contact
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation
Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion

If swallowed, seek medical advice immediately and show this safety data sheet (SDS) or product label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. Skin contact my cause skin sensitization.

Indication of Immediate medical attention and special treatment needed if necessary
No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

5. Firefighting measures

Suitable extinguishing media
Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media which shall not be used for safety reasons
High volume water jet

Hazardous combustion products
CO, CO2, smoke, and oxides of any heavy metals that are reported in “Composition, Information on Ingredients” section.

Fire and Explosion Hazards
Flammable liquid. Vapor/air mixture will burn when an ignition source is present.

Special Protective Equipment and Fire Fighting Procedures
Full protective flameproof clothing should be worn as appropriate. Wear self-contained breathing apparatus for firefighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter public sewer systems or public waterways.

6. Accidental release measures

Procedures for cleaning up spills or leaks
Ventilate area. Remove sources of ignition. Do not breathe vapors. Do not get in eyes or on skin. Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TM 10) and 80% Water OR 0-10% Ammonia, 2-5% Detergent and Water (balance) Confine and remove with inert absorbent. Pressure can be generated. Do not seal waste containers for 48 hours to allow C02 to vent. After 48 hours, material may be sealed and disposed of properly.

Environmental precautions
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

7. Handling and storage

Precautions for safe handling
Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY CAUSE FLASH FIRE. Close container after each use. Ground containers when pouring. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not store above 49 °C (120 °F). If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Build up of fine material should be cleaned using gentle sweeping or vacuuming in accordance with best practices. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

Advice on protection against fire and explosion
Solvent vapours are heavier than air and may spread along floors. Vapors may form explosive mixtures with air and will burn when an ignition source is present. Always keep in containers of same material as the original one. Never use pressure to empty container: container is not a pressure vessel. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimize the risks of spontaneous combustion and other fire hazards.

Storage

Requirements for storage areas and containers
Observe label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage
Store separately from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Precautions should be taken to avoid exposure to atmospheric humidity or water. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Additional information on storage conditions
Precautions should be taken to avoid exposure to atmospheric humidity or water. Humid air and/or water will produce carbon dioxide which will pressurize the container. Open drum carefully as content may be under pressure.

OSHA/NFPA Storage Classification: IB

8. Exposure controls/personal protection

Engineering controls and work practices
Provide adequate ventilation.

National occupational exposure limits

CAS-No.	Chemical name	Source	Time	Type	Value	Note
79-20-9	Methyl acetate	ACGIH	15 min	STEL	250 ppm	
		ACGIH	8 hr	TWA	200 ppm	
		OSHA	8 hr	TWA	200 ppm	
108-83-8	Diisobutyl ketone	ACGIH	8 hr	TWA	25 ppm	
		OSHA	8 hr	TWA	50 ppm	
110-43-0	Methyl amyl ketone	ACGIH	8 hr	TWA	50 ppm	
		OSHA	8 hr	TWA	100 ppm	
-	-					
STEL	Short term exposure limit.					
TWA	Time-weighted average.					

Protective equipment
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Respiratory protection
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator while mixing activator with paint, during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a positive-pressure, supplied air respirator (NIOSH approved TC-19C). Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area. Refer to the hardener/activator label instructions for further information. Individuals with a history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to vapor or spray mist.'

Eye protection
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

Skin and body protection
Neoprene gloves and coveralls are recommended.

Hygiene measures
Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Environmental exposure controls
Do not let product enter drains.
For ecological information, refer to Ecological Information Section 12.

9. Physical and chemical properties

Appearance

Form: liquid **Colour:** clear

Flash point	25 °F	
Lower Explosive Limit	0.8 %	
Upper Explosive Limit	16 %	
Evaporation rate	Slower than Ether	
Vapor pressure of principal solvent	35.8 hPa	
Water solubility	appreciable	
Vapor density of principal solvent (Air = 1)	2.6	
Approx. Boiling Range	55 °C	
Approx. Freezing Range	Not applicable.	
Gallon Weight (lbs/gal)	8.72	
Specific Gravity	1.04	
Percent Volatile By Volume	41.06%	
Percent Volatile By Weight	34.00%	
Percent Solids By Volume	58.94%	
Percent Solids By Weight	66.00%	
pH (waterborne systems only)	No data available.	
Partition coefficient: n-octanol/water	No data available	
Ignition temperature	345 °C	DIN 51794
Decomposition temperature	Not applicable.	
Viscosity (23 °C)	Not applicable.	ISO 2431-1993
VOC* less exempt (lbs/gal)	1.9	
VOC* as packaged (lbs/gal)	1.5	

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

10. Stability and reactivity

Stability
Stable

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7).

Materials to avoid
Keep away from oxidizing agents and strongly acid or alkaline materials. Amines and alcohols cause exothermic reactions. Mixture reacts slowly with water resulting in evolution of CO2. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

Hazardous decomposition products
When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen as well as hydrogen cyanide, amines, alcohols and water.

Hazardous Polymerization
Will not occur.

Sensitivity to Static Discharge
Solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact
None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion
May result in gastrointestinal distress.

Skin or eye contact
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute oral toxicity
not hazardous

Acute dermal toxicity
not hazardous

Acute inhalation toxicity
not hazardous

% of unknown composition: 0 %

Skin corrosion/irritation
Not classified according to GHS criteria

Serious eye damage/eye irritation

Methyl acetate Category 2A

Respiratory sensitisation
Not classified according to GHS criteria

Skin sensitisation

Aliphatic polyisocyanate resin Category 1

Germ cell mutagenicity
Not classified according to GHS criteria

Carcinogenicity
Not classified according to GHS criteria

Toxicity for reproduction
Not classified according to GHS criteria

Target Organ Systemic Toxicant - Single exposure

- **Inhalation**

  airway sensitivity Methyl amyl ketone
  Narcotic effects Methyl amyl ketone

Respiratory system Diisobutyl ketone, Methyl acetate

- **Ingestion**

  Respiratory tract irritation Methyl amyl ketone

  Narcotic effects Methyl amyl ketone

Target Organ Systemic Toxicant - Repeated exposure
Not classified according to GHS criteria

Aspiration toxicity
Not classified according to GHS criteria

Numerical measures of toxicity (acute toxicity estimation (ATE),etc.)
No information available.

Symptoms related to the physical, chemical and toxicological characteristics
Based on the properties of the isocyanate components and considering toxicological data on similar products, the following applies: This formulation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. Components of the product may be absorbed into the body through the skin.

Whether the hazardous chemical is listed by NTP, IARC or OSHA

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

Waste Disposal Method
Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

14. Transport information

International transport regulations

IMDG (Sea transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no
EmS:	F-E,S-E

ICAO/IATA (Air transport)

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II

DOT

UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Hazard Class:	3
Subsidiary Hazard Class:	Not applicable.
Packing group:	II
Marine Pollutant:	no

The transport information is for bulk shipments. Exceptions may apply for smaller containers.

Matters needing attention for transportation
Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

15. Regulatory information

TSCA Status
In compliance with TSCA Inventory requirements for commercial purposes.

DSL Status
All components of the mixture are listed on the DSL.

Photochemical Reactivity
Photochemically reactive

Regulatory information

		EPCRA					CERCLA	CAA
CAS #	Ingredient	302	TPQ	RQ	311/312	313	RQ(lbs)	HAP
28182-81-2	Aliphatic polyisocyanate resin	N	NR	NR	A,C,F,N,P,R	N	NR	N
79-20-9	Methyl acetate	N	NR	NR	A,C,F,N,P,R	N	100	N
108-83-8	Diisobutyl ketone	N	NR	NR	C,F	N	NR	N
110-43-0	Methyl amyl ketone	N	NR	NR	A,C,F	N	NR	N
19549-80-5	4,6-dimethyl-2-heptanone	N	NR	NR	NA	N	NR	N

Key:

EPCRA	Emergency Planning and Community Right-to-know Act (aka Title III, SARA)
302	Extremely hazardous substances
311/312 Categories	F = Fire Hazard A = Acute Hazard R = Reactivity Hazard C = Chronic Hazard P = Pressure Related Hazard
313 Information	Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP	Listed as a Clean Air Act Hazardous Air Pollutant.
TPQ	Threshold Planning Quantity.
RQ	Reportable Quantity
NA	not available
NR	not regulated

16. Other information

HMIS rating H: 3 F: 3 R: 1

Glossary of Terms:

ACGIH	American Conference of Governmental Industrial Hygienists.
IARC	International Agency for Research on Cancer.
NTP	National Toxicology Program.
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration.
STEL	Short term exposure limit.
TWA	Time-weighted average.
PNOR	Particles not otherwise regulated.
PNOC	Particles not otherwise classified.

NOTE: The list (above) of glossary terms may be modified.

Notice from Axalta Coating Systems :
The document reflects information provided to Axalta Coating Systems by its suppliers. Information is accurate to the best of our knowledge and is subject to change as new data is received by Axalta Coating Systems. Persons receiving this information should make their own determination as to its suitability for their purposes prior to use.
The information on this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SDS prepared by: Axalta Coating Systems Regulatory Affairs

Report version

Version	Changes
1.6	3

Revision Date: 2016-08-04

(855) 6-AXALTA
axalta.us

B12751887

MATERIAL SAFETY DATA SHEET

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

BIG SKY COMPLIANCE COATINGS
BINDERS & CLEARS

SECTION I. MANUFACTURER

ChemSpec USA, Inc. 9287 Smucker Road Orrville, OH 44667	**Telephone:** **Corporate Office:** **Chemtrec Emergency:** **Online:**	1-888/276-7071 1-800/328-4892 1-800/424-9300 www.chemspecpaint.com

Products on this MSDS:

BD10, BD12, BD15Flat, BD17, BD18, BD20, BD22, BD22Flat, BD28, BD30Flat, BD35, BD50, BDRD01, BDRD02, CRV21, CRV22, EZ316, EZ317, PE1700, PE1900, PE21, PE2100, PE2442, PE35, PE4000, PEV1700, PEV2100.

OSHA Hazard Class: Flammable Liquid
DOT Shipping Class: Paint Related Materials UN1263
Hazardous Materials Information: See Section X.

SECTION II. HAZARDOUS INGREDIENTS

Also see Section X.

INGREDIENTS	CAS#	VAPOR PRESSURE 20°C (MMHg)	SARA 313 REPORT	EXPOSURE LIMITS			
				OSHA	ACGIH	STEL	CEILING
1. Acetone	67-64-1	181.0	No	750 ppm	750 ppm	1000 ppm*	----
2. Acrylic Resin	N/E	N/E	No	N/A	N/A	N/A	N/A
3. Acrylic Resin #2	N/E	N/E	No	N/A	N/A	N/A	N/A
4. Acrylic Resin #3	N/E	N/E	No	N/A	N/A	N/A	N/A
5. Alkyd Resin	N/E	N/E	No	N/A	N/A	N/A	N/A
6. Butyl Acetate	123-86-4	8.40	No	150 ppm	150 ppm	200 ppm*	----
7. Cellulose Acetate Butyrate	9004-36-8	N/E	----	----	----	----	----
8. Chlorobenzotriflouride	98-56-6	0.29	No	N/E	N/E	N/E	----
9. Ethyl 3-Ethoxy Propionate	763-69-9	1.10	No	N/E	----	50 ppm(s)	----
10. Hexyl Acetate Isomer	90438-79-2	0.50	No	N/E	50 ppm	----	----
11. Hexyl Acetate Isomer #2	88230-37-7	0.70	No	N/E	50 ppm	----	----
12. LT Aliphatic Naptha	64742-89-8	N/E	No	300 ppm	300 ppm	400 ppm*	300 ppm TWA
13. Methoxy Propyl Acetate	108-65-6	3.80	No	N/E	N/E	N/E	----
14. Methyl Amyl Ketone	110-43-0	2.10	No	100 ppm	100 ppm	50 ppm	----
15. Methyl Ethyl Ketone	78-93-3	70.00	Yes	200 ppm	200 ppm	300 ppm	----
16. Methyl Isobutyl Ketone	108-10-1	15.00	Yes	100 ppm	50 ppm	75 ppm	----
17. Methyl Propyl Ketone	107-87-9	27.80	No	200 ppm	200 ppm	250 ppm*	----
18. Mineral Spirits 66	8052-41-3	2.60	No	500 ppm	150 ppm	150 ppm	----
19. N-Butanol	71-36-3	5.50	Yes	100 ppm	50 ppm	----	50 ppm skin*
20. N-Butyl Propionate	590-01-2	3.40	No	N/E	N/E	N/E	----
21. N-Pentyl Propionate	624-54-4	.70	No	N/E	50 ppm	----	----
22. Polyester Resin	N/E	N/E	No	N/A	N/A	N/A	N/A

23. Polyethylene Vinyl Acetate	N/E	----	----	----	----	----	----
24. 2-Propanol	67-63-0	30.00	No	400 ppm	400 ppm	500 ppm	----
25. Silica	112926-00-8	N/E	No	See Note B	See Note B	----	----
26. Solvent 100	64742-95-6	11.00	No	50 ppm	50 ppm	150 ppm	----
27. Tert Butyl Acetate	540-88-5	----	No	N/E	N/E	N/E	----
28. Toluene	108-88-3	36.00	Yes	100 ppm	Skin 50 ppm	150 ppm	200 ppm**
29. Titanium Dioxide	13463-67-7	None	No	10mg/m^3	10mg/m^3	----	----
30. VM & P Naptha	8032-32-4	38.00	No	300 ppm	300 ppm	400 ppm	----
31. Xylene *(Note A)*	1330-20-7	25.00	Yes	100 ppm	100 ppm	150 ppm	200 ppm**

**** Denotes 15 Minutes/** Denotes 10 Minutes***

Note A: Technical grade Xylene contains 18-20% Ethylbenzene (100-41-4), which has 100ppm PEL, 100ppm TLV, 125ppm STEL and is subject to the reporting requirements of Section 313 of Sara Title III.

Note B: OSHA PEL for Amorphous Silica according to 1910.1000 Table 2-3 is 20 MPCF the TLV is 10mg/m^3 for particulate not otherwise classified.

See Section X. for specific ingredients and SARA 313 reportable wt.% data.

SECTION III. PHYSICAL DATA

Also see Section X.

Boiling Range:	129°F - 374 °F	**Evaporation Rate:**	Slower than Ether
Solubility in H_2O:	Slight - Miscible	**Vapor Density:**	Heavier than Air
Volatile (%) by Volume:	38.90 -80.89	**Volatile (%) by Weight:**	33.46 -75.95
Weight per Gallon:	7.63 – 9.58 lbs./gal.		

SECTION IV. FIRE AND EXPLOSION

Flash Point: See Section X.

Flammable Limits: .8% - 13%

Extinguishing Media: Water Spray (for containment), Foam, Carbon Dioxide, Dry Chemical.

Special Fire Fighting Procedures:

Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fogging nozzles may be used to cool closed containers to prevent pressure build up and rupturing. Do not use direct water stream on combustible or flammable liquid fires.

Unusual fire and explosion hazards:

When heated above the defined flash points, these solvents emit flammable vapors which, when mixed with air, can burn or be explosive when exposed to any ignition source. Fine mists or spray may be flammable at temperatures below the flash point.

SECTION V. HEALTH HAZARD DATA

General Effects:

Ingestion: Gastrointestinal distress. In the unlikely event of ingestion call a physician immediately and have the names of the ingredients available.

Inhalation: May cause nose and throat irritation. Repeated and prolonged overexposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are signs that solvent levels are too high. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or Eye Contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Specific Effects:

Acetone: Can cause dermatitis.

Aromatic Hydrocarbons, Solvent 100, VMP Napthas & Mineral Spirits: Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs or monkeys. Several studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in liver tumors.

Butyl Acetate: May cause abnormal liver function.

Ethylbenzene: (Contributed from Xylene) - moderate toxicity by irritation to the skin, eyes, mucous membranes and by ingestion and inhalation routes. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

Methoxy Propyl Acetate: May cause moderate eye burning. Continuous re-over exposures may result in liver and kidney injury.

Methyl Amyl Ketone: Ingestion studies on laboratory animals showed that high oral doses caused increased liver and kidney weights.

Methyl Ethyl Ketone: High concentrations have caused embryo toxic effects in laboratory animals. Liquid splashed in the eyes may result in chemical burns.

Methyl Isobutyl Ketone: Recurrent over exposure may result in liver and kidney damage.

N-Butanol: May cause chemical burns to eyes. May cause abnormal blood forming function with anemia. Reoccurring overexposure may result in liver and kidney injury.

2-Propanol: Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights.

Silica: In powder form may cause discomfort to eyes, skin and respiratory tract.

Titanium Dioxide: In lifetime inhalation tests, lung cancer was found in some rats exposed to 250-mg/m^3 respirable dusts. Analysis showed due to overwhelmed levels this data is not relevant to the work place.

Toluene: Reoccurring overexposure may cause liver or kidney damage. High airborne levels have produced irregular heartbeats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. **Warning:** This chemical is known to the state of California to cause birth defects or other reproductive harm.

Xylene: High concentrations have caused embryo toxic effects in laboratory animals. Reoccurring overexposure may cause liver or kidney damage. Can be absorbed through the skin in harmful amounts.

SECTION VI. REACTIVITY DATA

Stability: Stable

Incompatibility (Materials to avoid): None reasonably foreseeable.

Hazardous Decomposition Products: CO, CO_2, Smoke.

Hazardous Polymerization: Will not occur.

SECTION VII. SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled: Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Wear a properly fitted vapor/particulate respirator (NIOSH/MSHA TC-23C). Confine and remove with inert absorbent.

Waste Disposal Method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state, and local requirements. Do not incinerate in closed containers.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Do not breathe vapors or mists. Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mists are exhausted. In confined spaces or in situations where continuous spray operations are typical or proper respirator fit is not possible, wear a positive-pressure, supplied-air respirator (TC-19C). In all cases, follow the respirator manufacturer's direction for respirator use. Do not permit anyone without protection in the painting area.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective Clothing: Neoprene gloves and coveralls are recommended.

Eye Protection: Desirable in all industrial situations. Include splashguards or side shields.

SECTION IX. SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Other Precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation.

SECTION X. OTHER INFORMATION
PRODUCT SPECIFICATIONS

For each product part number and chemical listing below the chemicals that have weight percentages in parenthesis are subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986 and 40 CFR 372.

BD10 Toluene (8.3%), Methyl Propyl Ketone 5-10%, Xylene (36.9%), Mineral Spirits 66, Alkyd & Acrylic Resins.

Date Code				
13-05-91	**Gallon Wt.:**	8.16 lbs.	**Flash Point:**	50°F
Or After	**Wt. % Solids:**	47.00	**Material VOC:**	4.32 lbs./gallon
	Vol. % Solids:	40.50	**Coating VOC:**	4.32 lbs./gallon
	OSHA Storage:	1B	**Solvent Density:**	7.18 lbs./gallon

BD12 Acrylic Resin, Alkyd Resin, Methyl Propyl Ketone 5-10%, Toluene (8%), Mineral Spirits 66

Gallon Wt.:	7.92 lbs.	**Flash Point:**	50°F
Wt. % Solids:	50.37	**Material VOC:**	3.93 lbs./gallon
Vol. % Solids:	41.30	**Coating VOC:**	3.93 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.80 lbs./gallon

BD15Flat Toluene (6.3%), Xylene (20%), Mineral Spirits 66, Methoxy Propyl Ketone 5-10%, Alkyd & Acrylic Resins, Silica.

Gallon Wt.:	8.39 lbs.	**Flash Point:**	55°F
Wt. % Solids:	50.20	**Material VOC:**	4.18 lbs./gallon
Vol. % Solids:	40.00	**Coating VOC:**	4.18 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.71 lbs./gallon

BD17 Alkyd Resin, Chlorobenzotriflouride, Methyl Amyl Ketone, N-Pentyl Propionate.

Gallon Wt.:	9.58 lbs.	**Flash Point:**	102°F
Wt. % Solids:	50.7	**Material VOC:**	1.37 lbs./gallon
Vol. % Solids:	50.2	**Coating VOC:**	1.97 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	1.138 g/L

Federally Exempt Solvent = 29.93% by Volume

BD18 Alkyd Resin, Butyl Acetate, Chlorobenzotriflouride, Methyl Propyl Ketone, Mineral Spirits, N-Pentyl Propionate.

Gallon Wt.:	8.89 lbs.	**Flash Point:**	46°F
Wt. % Solids:	54.01	**Material VOC:**	2.74 lbs./gallon
Vol. % Solids:	50.00	**Coating VOC:**	3.11 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	8.15 lbs./gallon

BD20 Toluene (7.5%), Xylene (18.3%), Mineral Spirits 66, Methyl Propyl Ketone 5-10%, Alkyd Resin.

Date Code				
13-05-91	**Gallon Wt.:**	7.97 lbs.	**Flash Point:**	50°F
Or After	**Wt. % Solids:**	46.80	**Material VOC:**	4.24 lbs./gallon
	Vol. % Solids:	39.00	**Coating VOC:**	4.24 lbs./gallon
	OSHA Storage:	1B	**Solvent Density:**	6.95 lbs./gallon

BD22 Hexyl Acetate Isomer #2, Acrylic Resin, Polyester Resin, Toluene (7.7%), Methoxy Propyl Acetate, Xylene (3.7%), Solvent 100, Methyl Ethyl Ketone (18.8%).

Gallon Wt.:	8.06 lbs.	**Flash Point:**	24°F
Wt. % Solids:	39.92	**Material VOC:**	4.84 lbs./gallon
Vol. % Solids:	33.37	**Coating VOC:**	4.84 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.27 lbs./gallon

BD22Flat Hexyl Acetate Isomers #2, Acrylic Resin, Polyester Resin, Methoxy Propyl Acetate, Xylene (3%), Solvent 100, Methyl Ethyl Ketone (16%), Silica, Tolulene (6.5%).

Gallon Wt.:	8.56 lbs.	**Flash Point:**	24°F
Wt. % Solids:	47.20	**Material VOC:**	4.53 lbs./gallon
Vol. % Solids:	37.70	**Coating VOC:**	4.53 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.27 lbs./gallon

BD28 Acrylic Resin, Polyester Resin, Reactive Dilvent, Methyl Amyl Ketone 10-15%, Methoxy Propyl Acetate, Xylene (<1%), Hexyl Acetate Isomer, Solvent 100, Chlorobenzotriflouride.

Gallon Wt.:	8.84 lbs.	**Flash Point:**	22°F
Wt. % Solids:	46.60	**Material VOC:**	2.12 lbs./gallon
Vol. % Solids:	44.30	**Coating VOC:**	2.88 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	8.46 lbs./gallon

Federally Exempt Solvent = 25.91% by Volume

BD30Flat Methyl Isobutyl Ketone (15%), Xylene (.7%), Methoxy Propyl Acetate, Acetone, Acrylic & Polyester Resins, Silica, Methyl Amyl Ketone 10-15%.

Gallon Wt.:	8.67 lbs.	**Flash Point:**	20°F
Wt. % Solids:	62.14	**Material VOC:**	2.76 lbs./gallon
Vol. % Solids:	52.00	**Coating VOC:**	3.00 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.80 lbs./gallon

Federally Exempt Solvent = 7.90% by Volume

BD35 Acrylic Resin, Polyester Resin, Reactive Dilvent, Methyl Amyl Ketone 10-15%, Methoxy Propyl Acetate, Methyl Isobutyl Ketone (13.5%), Acetone, Xylene (<1%), Hexyl Acetate Isomer, Solvent 100.

Gallon Wt.:	8.03 lbs.	**Flash Point:**	20°F
Wt. % Solids:	54.07	**Material VOC:**	3.29 lbs./gallon
Vol. % Solids:	46.80	**Coating VOC:**	3.50 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.95 lbs./gallon

Federally Exempt Solvent = 6.07% by Volume

BD50 Acrylic Resin, Polyester Resin, Butyl Acetate 30-35%, Acetone 5-10%, 2-Propanol 1-5%, Xylene (26.6%), Mineral Spirits 66, Butanol 0-5%.

Gallon Wt.:	7.63 lbs.	**Flash Point:**	10°F
Wt. % Solids:	24.05	**Material VOC:**	5.13 lbs./gallon
Vol. % Solids:	19.11	**Coating VOC:**	5.70 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.16 lbs./gallon

Federally Exempt Solvent = 9.97% by Volume

BDRD01 Acetone 15-20%, Acrylic Resins, Butyl Acetate 20-25%, Cellulose Acetate Butyrate, Toluene (29%), Polytethylene Vinyl Acetate, Xylene (16%), 2-Propanol 1-5%, N-Butanol 1-5%.

Gallon Wt.:	7.28 lbs.	**Flash Point:**	0°F
Wt. % Solids:	9.67	**Material VOC:**	4.70 lbs./gallon
Vol. % Solids:	7.55	**Coating VOC:**	6.55 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.09 lbs./gallon

Federally Exempt Solvent = 20.50% by Volume

BDRD02 Acetone 10-15%, Acrylic Resins, Butyl Acetate 20-25%, Cellulose Acetate Butyrate, MEK (4%), Toluene (25%), Xylene (5%).

Gallon Wt.:	7.66 lbs.	**Flash Point:**	0°F
Wt. % Solids:	30.40	**Material VOC:**	4.51 lbs./gallon
Vol. % Solids:	24.80	**Coating VOC:**	5.10 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.09 lbs./gallon

Federally Exempt Solvent = 12.40% by Volume

CRV21 Acrylic Resin, Acetone 10-15%, Butyl Acetate 1-5%, Chlorobenzotriflouride, Hexyl Acetate Isomer, Methoxy Propyl Acetate 0-5%, Methyl Amyl Ketone 5-10%, Polyester Resin.

Gallon Wt.:	9.12 lbs.	**Flash Point:**	0°F
Wt. % Solids:	33.50	**Material VOC:**	1.00 lbs./gallon
Vol. % Solids:	32.00	**Coating VOC:**	2.17 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.83 lbs./gallon

Federally Exempt Solvent = 54.20% by Volume

CRV22 Acrylic Resin, Polyester Resin, Methyl Amyl Ketone 15-20%, Methyl Ethyl Ketone (24%), Methoxy Propyl Acetate, Acetone 1-5%, Chlorobenzotriflouride, Xylene (<1%), Butyl Acetate 1-5%, Hexyl Acetate Isomer.

Gallon Wt.:	8.14 lbs.	**Flash Point:**	20°F
Wt. % Solids:	37.20	**Material VOC:**	3.75 lbs./gallon
Vol. % Solids:	32.00	**Coating VOC:**	4.28 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.45 lbs./gallon

Federally Exempt Solvent = 13.84% by Volume

EZ316 Acrylic Resin, Methyl Amyl Ketone 5-10%, Methyl Ethyl Ketone (10%), Acetone 5-10%, Xylene (18.7%), Methoxy Propyl Acetate, Butyl Acetate 1-5%, N-Butyl Propionate.

Gallon Wt.:	7.65 lbs.	**Flash Point:**	-4°F TCC
Wt. % Solids:	35.5	**Material VOC:**	3.27 lbs./gallon
Vol. % Solids:	29.0	**Coating VOC:**	4.38 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.03 lbs./gallon

Federally Exempt Solvent = 25.4% by Volume

EZ317 Acrylic Resin, Polyester Resin, Methyl Amyl Ketone 20-25%, Methyl Ethyl Ketone (20%), Methoxy Propyl Acetate, Tert Butyl Acetate, Acetone 1-5%, Chlorobenzotriflouride, Xylene (3.10%), Butyl Acetate 1-5%, Hexyl Acetate Isomer.

Gallon Wt.:	7.72 lbs.	**Flash Point:**	20°F
Wt. % Solids:	37.70	**Material VOC:**	4.06 lbs./gallon
Vol. % Solids:	30.60	**Coating VOC:**	4.49 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.45 lbs./gallon

Federally Exempt Solvent = 10.4% by Volume

PE1700 Acrylic Resin, Methyl Amyl Ketone 15-20%, Xylene (<1%), Methyl Isobutyl Ketone (15.9%), Butyl Acetate 1-5%, Acetone 1-6%.

Gallon Wt.:	7.98 lbs.	**Flash Point:**	20°F
Wt. % Solids:	56.90	**Material VOC:**	3.00 lbs./gallon
Vol. % Solids:	49.21	**Coating VOC:**	3.21 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.78 lbs./gallon

Federally Exempt Solvent = 6.75% by Volume

PE1900 AcrylicResins, Acetone 25-30%, N-Butyl Propionate, Xylene (16%), Methyl Amyl Ketone 5-10%.

Gallon Wt.:	7.59 lbs.	**Flash Point:**	0°F
Wt. % Solids:	35.20	**Material VOC:**	2.91 lbs./gallon
Vol. % Solids:	28.90	**Coating VOC:**	4.19 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.95 lbs./gallon

PE21 Acrylic Resin, Methyl Amyl Ketone 15-20%, Chlorobenzotriflouride, Methyl Acetate 5-10%, N-Butyl Propionate.

Gallon Wt.:	8.71 lbs.	**Flash Point:**	5°F
Wt. % Solids:	57.91	**Material VOC:**	1.99 lbs./gallon
Vol. % Solids:	55.0	**Coating VOC:**	2.41 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	8.50 lbs./gallon

Federally Exempt Solvent = 17.44% by Volume

PE2100 Acrylic Resin, Acetone 10-15%, N-Butyl Propionate, Butyl Acetate, Xylene (7%), Hexyl Acetate Isomer.

Gallon Wt.:	8.04 lbs.	**Flash Point:**	-5°F
Wt. % Solids:	45.90	**Material VOC:**	3.47 lbs./gallon
Vol. % Solids:	39.50	**Coating VOC:**	4.00 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.12 lbs./gallon

PE2442 Acrylic Resins, Butyl Acetate 5-10%, Xylene (16%), Methyl Amyl Ketone 10-15%, Methyl Isobutyl Ketone (9%), Methoxy Propyl Acetate, LT Aliphatic Naptha, Acetone 1-5%.

Gallon Wt.:	7.94 lbs.	**Flash Point:**	50 °F
Wt. % Solids:	46.10	**Material VOC:**	4.02 lbs./gallon
Vol. % Solids:	39.04	**Coating VOC:**	4.19 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.05 lbs./gallon

PE35 Acrylic Resin #2, Methyl Amyl Ketone 10-15%, Methyl Isobutyl Ketone (20.3%), Butyl Acetate 1-5%, Xylene (<1%), Polyester Resin, Ethyl 3-Ethoxy Propionate.

Gallon Wt.:	7.91 lbs.	**Flash Point:**	61°F
Wt. % Solids:	51.10	**Material VOC:**	3.87 lbs./gallon
Vol. % Solids:	43.00	**Coating VOC:**	3.87 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.70 lbs./gallon

PE4000 Acrylic Resin, Acetone, Butyl Acetate 1-5%, N-Pentyl Propionate 5-10%, Tert Butyl Acetate 15-20%, Xylene (27%).

Gallon Wt.:	7.79 lbs.	**Flash Point:**	-5°F
Wt. % Solids:	34.0	**Material VOC:**	2.76 lbs./gallon
Vol. % Solids:	28.9	**Coating VOC:**	4.3 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.29 lbs./gallon

Federally Exempt Solvent = 32.2% by Volume

PEV1700 Acrylic Resin, Methyl Amyl Ketone 15-20%, Xylene (<1%), Methyl Isobutyl Ketone (15.9%), Butyl Acetate 1-5%, Acetone 1-6%.

Gallon Wt.:	7.98 lbs.	**Flash Point:**	20°F
Wt. % Solids:	56.90	**Material VOC:**	3.00 lbs./gallon
Vol. % Solids:	49.21	**Coating VOC:**	3.21 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.78 lbs./gallon

Federally Exempt Solvent = 6.75% by Volume

PEV2100 Acrylic Resin, Acetone 15-20%, N-Butyl Propionate, Xylene (5%), Hexyl Acetate Isomer.

Gallon Wt.:	8.35 lbs.	**Flash Point:**	-5°F
Wt. % Solids:	42.60	**Material VOC:**	2.17 lbs./gallon
Vol. % Solids:	37.95	**Coating VOC:**	3.23 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.03 lbs./gallon

Xylene: when present it can be assumed 18-20% of the Wt. % reported is Ethylbenzene**.**

Flash Point: Determined by TCC, expressed in degrees Fahrenheit.

Coating VOC: $\frac{W_S - W_W - W_{EX}}{V_T - V_W - V_{EX}}$ Represents VOC per EPA Method 24.

Material VOC: $w_S - w_W - w_{EX}$

Where: W_S = total solvent weight
W_W = weight of water
W_{EX} = weight of exempt solvent
V_{EX} = volume of exempt solvent
V_W = volume of water
V_T = total volume

Warning: KEEP THIS AND ALL PAINT RELATED PRODUCTS OUT OF THE REACH OF CHILDREN!

The information contained in this MSDS is based on data from sources considered to be reliable but ChemSpec USA, Inc. does not guarantee the accuracy or completeness thereof. ChemSpec USA, Inc. urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire prevention as necessary or appropriate to use and understand the data in this MSDS.

Note: The data on this MSDS relates only to individual components and does not represent the end mixed product. Read all other Component Material Safety Data Sheets.

END OF MSDS

MATERIAL SAFETY DATA SHEET

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

BIG SKY COMPLIANCE COATINGS
ACTIVATORS FOR PAINT, CLEARS, & PRIMERS

SECTION I. MANUFACTURER

ChemSpec USA, Inc. 9287 Smucker Road Orrville, OH 44667	**Telephone:** **Corporate Office:** **Chemtrec Emergency:** **Online:**	1-888/276-7071 1-800/328-4892 1-800/424-9300 www.chemspecpaint.com

Products on this MSDS:

CR22AES, CR22AF, CR22AM, CR22AS, CRV21AF, CRV21AM, CRV21AS, EZ317AES, EZ317AN, EZ317AS, EZ600B, MP1050,MP1575, MP1585, MP1707, MP1708, MP1710, MP1965, MP1975, MP1985, MP1995, MP2000, MP2165, MP2175, MP2185, MP2195, MP2444, MP4065, MP4075, MP4085, MPV2000, MPV2165, MPV2175, MPV2185, PA3040E, PA3040V, PA3050F, PA3050M, PA3120M, PA3120S, PA3200M,PA3200S, PA3400M, PA3400S,PO21A, PO28AN, PO35AN, PO35AS, PS5008B, PS5012B.

OSHA Hazard Class: Flammable Liquid
DOT Shipping Class: Paint Related Materials UN1263
Hazardous Materials Information: See Section X.

SECTION II. HAZARDOUS INGREDIENTS

Also see Section X.

INGREDIENTS	CAS#	VAPOR PRESSURE 20°C (MMHg)	SARA 313 REPORT	EXPOSURE LIMITS			
				OSHA	ACGIH	STEL	CEILING
1. Acetone	67-64-1	181.00	No	750 ppm	750 ppm	1000 ppm	----
2. 2-Butoxy Ethyl Acetate	112-07-2	0.29	No	N/E	N/E	N/E	----
3. Aliphatic Polyisocynate Resin (HDI #1)	28182-81-2	Unknown	No	.5mg/m3(S)	N/E	1.0mg/m3*	----
4. 4,4-Diphenylmethane Diisocyanate [1]	101-68-8	N/A	Yes	.02 ppm	.005 ppm	.02 ppm	.200 mg/m3
5. Butyl Acetate	123-86-4	8.40	No	150 ppm	150 ppm	200 ppm*	----
6. Chlorobenzotriflouride	98-56-6	0.29	No	N/E	N/E	N/E	----
7. Ethyl Acetate	141-78-6	76.00	No	400 ppm	400 ppm	----	----
8. Ethyl 3-Ethoxy Propionate	763-69-9	1.10	No	N/E	----	50 ppm(S)	
9. 2-Ethyl-Hexyl Acetate	103-09-3	0.29	No	N/E	N/E	N/E	----
10. Heptane	142-82-5	40.00	No	400 ppm	N/E	500 ppm	----
11. Hexamethylene Diisocyanate Monomer	822-06-0	Unknown	Yes	5ppb	5ppb	1.0mg/m^3*	----
12. N-PentylPropionate	624-54-8	105	no	N/E	50	N/E	----
13. Isophorone Diisocyanate Resin	4098-71-9	N/A	No	5 ppb	5 ppb	1.0mg/m^3*	----
14. Ketamine Resin	Proprietary	N/A	N/E	N/E	N/E	N/E	----
15. Lt Aliphatic Naptha	64742-89-8	38.00	No	300 ppm	300 ppm	400 ppm	----
16. Methoxy Propyl Acetate	108-65-6	3.80	No	N/E	N/E	N/E	----
17. Methyl Amyl Ketone	110-43-0	2.10	No	100 ppm	100 ppm	50 ppm	----
18. Methyl Ethyl Ketone	78-93-0	70.00	Yes	200 ppm	200 ppm	300 ppm	----
19. Methyl Isobutyl Ketone	108-10-1	15.00	Yes	100 ppm	50 ppm	75 ppm*	----
20. N-Butanol	71-36-3	5.50	Yes	100 ppm	50 ppm	----	50 ppm skin*
21. Oxo-Octyl Acetate	108419-32-5	N/A	No	----	----	----	----
22. Polyamide Resin	N/A	Proprietary	No	N/E	N/E	N/E	----

23. 2-Propanol	67-63-0	30.00	No	400 ppm	400 ppm	500 ppm	----
24. Solvent 100	64742-95-6	11.00	No	50 ppm	50 ppm	150 ppm	----
25. Tert Butyl Acetate	540-88-5	----	No	N/E	N/E	N/E	----
26. Toluene	108-88-3	36.00	Yes	100 ppm	50 ppm	150 ppm	200 ppm**
27. VM&P Naptha	8032-32-4	38.00	No	300 ppm	300 ppm	400 ppm	----
28. Xylene *(Note A)*	1330-20-7	25.00	Yes	100 ppm	100 ppm	150 ppm	200 ppm**

[1] ***Based on MDI/* Denotes 15 Minutes/** Denotes 10 Minutes/ (S) = Supplier/ N/E = Not Established***

Note A: Technical grade Xylene contains 18-20% Ethylbenzene (100-41-4), which has 100ppm PEL, 100ppm TLV, 125ppm STEL and is subject to the reporting requirements of Section 313 of Sara Title III.

See Section X. for specific ingredients and SARA 313 reportable wt.% data.

SECTION III. PHYSICAL DATA

Also see Section X.

Boiling Range:	129°F - 374 °F	**Evaporation Rate:**	Slower than Ether
Solubility in H_2O:	Miscible	**Vapor Density:**	Heavier than Air
Volatile (%) by Volume:	20.7 - 88.82	**Volatile (%) by Weight:**	15.8 - 86.5
Weight per Gallon:	7.15 - 10.51 lbs./gal.		

SECTION IV. FIRE AND EXPLOSION

Flash Point: See Section X.

Flammable Limits: .8% - 13%

Extinguishing Media: Water Spray (for containment), Foam, Carbon Dioxide, Dry Chemical.

Special Fire Fighting Procedures:

Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fogging nozzles may be used to cool closed containers to prevent pressure build up preventing rupturing. Do not use direct water stream on combustible or flammable liquid fires.

Unusual fire and explosion hazards:

When heated above the defined flash points these solvents emit flammable vapors which, when mixed with air, can burn or be explosive when exposed to any ignition source. Fine mists or spray may be flammable at temperatures below the flash point.

SECTION V. HEALTH HAZARD DATA

General Effects:

Ingestion: Gastrointestinal distress. In the unlikely event of ingestion call a physician immediately and have the names of ingredients available.

Inhalation: May cause nose and throat irritation. Repeated and prolonged overexposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are signs that solvent levels are too high. Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with breathing problems or prior reaction to isocyanates must not be exposed to vapors or spray mist of this product. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or Eye Contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Specific Effects:

Acetone: Can cause dermatitis.

2- Butoxy Ethyl Acetate- Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause kidney disorders.

Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate, and Isophorone Diisocyanate Resin: Repeated exposure may cause allergic skin rash, itching, swelling. May cause eye irritation with discomfort, tearing, or blurred vision. Repeated overexposure to isocyanates may cause lung injury, including a decrease in lung function, which may be permanent. Overexposure may cause asthma-like reactions with shortness of breathe, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. Individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures.

Aromatic Hydrocarbons, Solvent 100, VMP Napthas, Lt Aliphatic Naptha, Heptane, & Mineral Spirits: Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs or monkeys. Several studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in liver tumors.

4,4-Diphenylmethane Diisocyanate: (Based on MDI) May redden and irritate skin over prolonged skin contact. May cause eye irritation, swelling and tearing; if untreated may cause cornea damage. Can cause corrosive action in mouth, stomach tissue and digestive track. Symptoms can include sore throat, nausea, and vomiting. Over exposure can cause asthma or other respiratory diseases.

Butyl Acetate: May cause abnormal liver function.

Ethyl Acetate: Prolonged and repeated high exposure of laboratory animals resulted in secondary anemia with increase in white blood cells.

Ethylbenzene: (Contributed from Xylene) - moderate toxicity by irritation to the skin, eyes, mucous membranes and by ingestion and inhalation routes. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

Methoxy Propyl Acetate: May cause moderate eye burning. Continuous re-over exposures may result in liver and kidney injury.

Methyl Acetate: May irritate nose, throat,skin. Exposure can cause dizziness, light headedness, headache, and nausea

Methyl Amyl Ketone: Ingestion studies on laboratory animals showed that high oral doses caused increased liver and kidney weights.

Methyl Ethyl Ketone: High concentrations have caused embryo toxic effects in laboratory animals. Liquid splashed in the eyes may result in chemical burns.

Methyl Isobutyl Ketone: Recurrent overexposure may result in liver and kidney damage.

Butanol: May cause chemical burns to eyes. May cause abnormal blood forming function with anemia. Reoccurring overexposure may result in liver and kidney injury.

2-Propanol: Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights.

Toluene: Continuous recurrent overexposure may cause liver or kidney damage. High airborne levels have produced irregular heartbeats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. **Warning:** This chemical is known to the state of California to cause birth defects or other reproductive harm.

Xylene: High concentrations have caused embryo toxic effects in laboratory animals. Continuous recurrent overexposure may cause liver or kidney damage. Can be absorbed through the skin in harmful amounts.

SECTION VI. REACTIVITY DATA

Stability: Stable

Incompatibility (Materials to avoid): None reasonably foreseeable.

Hazardous Decomposition Products: CO, CO_2, Smoke.

Hazardous Polymerization: Will not occur.

SECTION VII. SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled: Do not breathe vapors. Do not get in eyes or on skin. Wear a positive pressure supplied air vapor/particulate respirator (NIOSH/MSHA TC-19C), eye protection, gloves and protective material. Remove sources of ignition. Absorb with inert material. Ventilate area.

Waste Disposal Method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state, and local requirements. Do not incinerate in closed containers.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Respiratory: Do not breathe vapors or mists. Wear a positive pressure supplied air respirator (NIOSH/MSHA) (TC-19C) while mixing activator with any paint or clear enamel, during application and until all vapors and spray mists are exhausted. Individuals with a history of lung or breathing problems or prior reaction to isocyanate should not use or be exposed to this product. Do not permit anyone without protection in the painting area. Follow the respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective Clothing: Neoprene gloves and coveralls are recommended.

Eye Protection: Desirable in all industrial situations. Include splashguards or side shields.

SECTION IX. SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Other Precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation.

SECTION X. OTHER INFORMATION
PRODUCT SPECIFICATIONS

For each product part number and chemical listing below the chemicals that have weight percentages in parenthesis .are subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986 and 40 CFR 372.

CR22AES Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Methyl Amyl Ketone 15-20%, 2-Ethyl-Hexyl Acetate, Chlorobenzotriflouride.

Gallon Wt.:	8.41 lbs.	**Flash Point:**	85°F
Wt. % Solids:	50.1	**Material VOC:**	3.72 lbs./gallon
Vol. % Solids:	43.3	**Coating VOC:**	3.89 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.40 lbs./gallon

Federally Exempt Solvent = 4.29% by Volume

CR22AF Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Xylene (8.6%), Methyl Isobutyl Ketone (33.6%), Butyl Acetate 1-5%, Solvent 100.

Gallon Wt.:	8.09 lbs.	**Flash Point:**	61°F
Wt. % Solids:	52.03	**Material VOC:**	3.88 lbs./gallon
Vol. % Solids:	43.30	**Coating VOC:**	3.88 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.84 lbs./gallon

CR22AM Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Methyl Isobutyl Ketone (20%), Methyl Amyl Ketone 20-25%, Butyl Acetate 1-5%, Solvent 100.

Gallon Wt.:	8.08 lbs.	**Flash Point:**	61°F
Wt. % Solids:	52.13	**Material VOC:**	3.87 lbs./gallon
Vol. % Solids:	43.30	**Coating VOC:**	3.87 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.82 lbs./gallon

CR22AS Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Methyl Amyl Ketone 40-45%, Solvent 100, Butyl Acetate 1-5%

Gallon Wt.:	8.10 lbs.	**Flash Point:**	78°F
Wt. % Solids:	52.10	**Material VOC:**	3.88 lbs./gallon
Vol. % Solids:	43.30	**Coating VOC:**	3.88 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.83 lbs./gallon

CRV21AF Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Butyl Acetate, Cholorobenzotriflouride, Isophorone Diisocyanate Resin, Methyl Amyl Ketone, Solvent 100.

Gallon Wt.:	9.81 lbs.	**Flash Point:**	72°F
Wt. % Solids:	45.5	**Material VOC:**	1.13 lbs./gallon (136 g/L)
Vol. % Solids:	46.0	**Coating VOC:**	1.82 lbs./gallon (218 g/L)
OSHA Storage:	1B	**Solvent Density:**	10.14 lbs./gallon

Federally Exempt Solvent = 37.8% by Volume

CRV21AM Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (<.05%), N-Pentyl Propionate Acetate, Chlorobenzotriflouride.

Gallon Wt.:	9.95 lbs.	**Flash Point:**	109°F
Wt. % Solids:	42.32	**Material VOC:**	1.09 lbs./gallon
Vol. % Solids:	43.50	**Coating VOC:**	1.86 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	10.14 lbs./gallon

Federally Exempt Solvent = 41.6% by Volume

CRV21AS Aliphatic Polyisocyanate Resin, Chlorobenzotriflouride, Hexamethylene Diisocyanate Monomer (<.05%), Oxo-Octyl Acetate.

Gallon Wt.:	9.92 lbs.	**Flash Point:**	109°F
Wt. % Solids:	43.20	**Material VOC:**	1.09 lbs./gallon
Vol. % Solids:	44.20	**Coating VOC:**	1.86 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	10.18 lbs./gallon

Federally Exempt Solvent = 40.65% by Volume

EZ317AES Aliphatic Polyisocyanate Resin (HDI #1), Hexamethylene Diisocyanate Monomer (<.05%), Methyl Amyl Ketone 10-15%, Tert Butyl Acetate < 5%, Oxo-Octyl Acetate.

Gallon Wt.:	8.19 lbs.	**Flash Point:**	70°F
Wt. % Solids:	49.40	**Material VOC:**	3.82 lbs./gallon
Vol. % Solids:	41.70	**Coating VOC:**	4.00 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.05 lbs./gallon

EZ317AN Aliphatic Polyisocyanate Resin (HDI #1), Hexamethylene Diisocyanate Monomer (<.05%), Methyl Amyl Ketone 20-25%, Methyl Isobutyl Ketone (19%), Butyl Acetate 1-5%, Solvent 100.

Gallon Wt.:	8.02 lbs.	**Flash Point:**	60°F
Wt. % Solids:	50.44	**Material VOC:**	3.97 lbs./gallon
Vol. % Solids:	41.70	**Coating VOC:**	3.97 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.84 lbs./gallon

EZ317AS Aliphatic Polyisocyanate Resin (HDI #1), Hexamethylene Diisocyanate Monomer (<.05%), Butyl Acetate 1-5%, Solvent 100, Methyl Amyl Ketone 40-45%.

Gallon Wt.:	8.06 lbs.	**Flash Point:**	70°F
Wt. % Solids:	50.25	**Material VOC:**	4.00 lbs./gallon
Vol. % Solids:	41.70	**Coating VOC:**	4.00 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.86 lbs./gallon

EZ600B Aliphatic Polyisocyanate Polymer (HDI #1), Hexamethylene Diisocyanate Monomer (<.04%), Xylene (56%), Butyl Acetate 5-10%.

Gallon Wt.:	7.96 lbs.	**Flash Point:**	80°F
Wt. % Solids:	37.50	**Material VOC:**	4.98 lbs./gallon
Vol. % Solids:	31.50	**Coating VOC:**	4.98 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.25 lbs./gallon

MP1050 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Xylene (27.2%), Methyl Isobutyl Ketone (6%), Solvent 100, Butyl Acetate 1-5%.

Gallon Wt.:	8.50 lbs.	**Flash Point:**	61°F
Wt. % Solids:	60.13	**Material VOC:**	3.39 lbs./gallon
Vol. % Solids:	52.67	**Coating VOC:**	3.39 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.16 lbs./gallon

MP1575 Aliphatic Polyisocyanate Resin, Butyl Acetate, Methyl Amyl Ketone

Gallon Wt.:	8.38 lbs.	**Flash Point:**	72°F
Wt. % Solids:	59.85	**Material VOC:**	3.36 lbs./gallon(403g/L)
Vol. % Solids:	52.5	**Coating VOC:**	3.36 lbs./gallon(403g/L)
OSHA Storage:	1B	**Solvent Density:**	7.05 lbs./gallon

MP1585 Aliphatic Polyisocyanate Resin, Methyl Amyl Ketone, N-Pentyl Proprionate

Gallon Wt.:	8.39 lbs.	**Flash Point:**	102°F
Wt. % Solids:	59.8	**Material VOC:**	3.38 lbs./gallon(405g/L)
Vol. % Solids:	52.5	**Coating VOC:**	3.38 lbs./gallon(405g/L)
OSHA Storage:	1B	**Solvent Density:**	7.08 lbs./gallon

MP1707 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.03%), Toluene (9.6%), Xylene (18.2%), Butyl Acetate 15-20%, Isophorone Diisocyanate (< .35%), Solvent 100, Chlorobenzotriflouride.

Gallon Wt.:	8.41 lbs.	**Flash Point:**	45°F
Wt. % Solids:	40.10	**Material VOC:**	4.12 lbs./gallon
Vol. % Solids:	35.30	**Coating VOC:**	4.49 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.78 lbs./gallon

Federally Exempt Solvent = 8.24% by Volume

MP1710 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Isophorone Diisocyanate Resin (< .35%), Methyl Amyl Ketone 30-35%, Butyl Acetate 1-5%, Solvent 100.

Gallon Wt.:	8.28 lbs.	**Flash Point:**	78°F
Wt. % Solids:	57.80	**Material VOC:**	3.49 lbs./gallon
Vol. % Solids:	49.60	**Coating VOC:**	3.49 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.92 lbs./gallon

MP1965 Aliphatic PolyIsocyanate Resin, Hexamethylene Diisocyanate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Butyl Acetate 20-25%, N-Pentyl Propionate, Solvent 100, Toluene (13%).

Gallon Wt.:	8.30 lbs.	**Flash Point:**	50°F
Wt. % Solids:	48.40	**Material VOC:**	4.28 lbs./gallon
Vol. % Solids:	41.50	**Coating VOC:**	4.28 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.30 lbs./gallon

MP1975 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Butyl Acetate 30-35%, N-Pentyl Propionate, Solvent 100, Xylene (7.1%).

Gallon Wt.:	8.31 lbs.	**Flash Point:**	72°F
Wt. % Solids:	48.40	**Material VOC:**	4.29 lbs./gallon
Vol. % Solids:	41.50	**Coating VOC:**	4.29 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.30 lbs./gallon

MP1985 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Oxo-Ocytyl Acetate, Ethyl-3 Ethoxy Propionate, 2- Butoxy Ethyl Acetate, Butyl Acetate 10-35%, Solvent 100.

Gallon Wt.:	8.35 lbs.	**Flash Point:**	72°F
Wt. % Solids:	48.33	**Material VOC:**	4.31 lbs./gallon
Vol. % Solids:	41.70	**Coating VOC:**	4.31 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.34 lbs./gallon

MP1995 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Oxo-Ocytyl Acetate, Ethyl-3 Ethoxy Propionate, 2-Butoxy Ethyl Acetate, Butyl Acetate 1-5%, Methyl Amyl Ketone 10-15%, Solvent 100.

Gallon Wt.:	8.26 lbs.	**Flash Point:**	72°F
Wt. % Solids:	47.95	**Material VOC:**	4.30 lbs./gallon
Vol. % Solids:	41.70	**Coating VOC:**	4.30 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.34 lbs./gallon

MP2000 Aliphatic Polyisocyanate Resin,Hexamethylene Diisocyonate Monomer (0.04%), Xylene (62%), Solvent 100, Butyl Acetate 1-5%.

Gallon Wt.:	7.93 lbs.	**Flash Point:**	63°F
Wt. % Solids:	34.11	**Material VOC:**	5.23 lbs./gallon
Vol. % Solids:	27.90	**Coating VOC:**	5.23 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.26 lbs./gallon

MP2165 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyonate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Toluene (16%), Butyl Acetate 35-40%, Solvent 100.

Gallon Wt.:	8.11 lbs.	**Flash Point:**	45°F
Wt. % Solids:	39.70	**Material VOC:**	4.89 lbs./gallon
Vol. % Solids:	33.50	**Coating VOC:**	4.89 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.26 lbs./gallon

MP2175 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyonate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Butyl Acetate 20-25%, Solvent 100, Xylene (25%), Methyl Amyl Ketone 5-10%.

Gallon Wt.:	8.03 lbs.	**Flash Point:**	63°F
Wt. % Solids:	38.95	**Material VOC:**	4.90 lbs./gallon
Vol. % Solids:	32.50	**Coating VOC:**	4.90 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.22 lbs./gallon

MP2185 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyonate Resin (.04%), Butyl Acetate 1-5%, Solvent 100, Xylene (22%), Methyl Amyl Ketone 15-20%, 2- Butoxy Ethyl Acetate

Gallon Wt.:	7.93 lbs.	**Flash Point:**	63°F
Wt. % Solids:	38.20	**Material VOC:**	4.90 lbs./gallon
Vol. % Solids:	31.50	**Coating VOC:**	4.90 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.22 lbs./gallon

MP2195 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyonate Resin (.03%), Ethyl-3 Ethoxy Propionate, Methyl Amyl Ketone 15-20%, Oxo-Ocytyl Acetate, Butoxy Ethyl Acetate , Chlorobenzotriflouride.

Gallon Wt.:	8.04 lbs.	**Flash Point:**	102°F
Wt. % Solids:	38.50	**Material VOC:**	4.86 lbs./gallon
Vol. % Solids:	32.00	**Coating VOC:**	4.90 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.27 lbs./gallon

MP2444 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer, (.07%), Isophorone Diisocyanate Resin (< .35%), Methyl Amyl Ketone 10-15%, Chlorobenzotriflouride.

Gallon Wt.:	9.04 lbs.	**Flash Point:**	102°F
Wt. % Solids:	78.25	**Material VOC:**	1.34 lbs./gallon
Vol. % Solids:	74.80	**Coating VOC:**	1.41 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	6.81 lbs./gallon

Federally Exempt Solvent = 5.67% by Volume

MP4065 Aliphatic Polyisocyanate Resin, Butyl Acetate 15-20%, Hexamethylene Diisocyanate Monomer, (<.4%), Solvent 100, Toluene (32%), Xylene (6%).

Gallon Wt.:	8.13 lbs.	**Flash Point:**	45°F
Wt. % Solids:	43.2	**Material VOC:**	4.62 lbs./gallon
Vol. % Solids:	37.0	**Coating VOC:**	4.62 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.28 lbs./gallon

MP4075 Aliphatic Polyisocyanate Resin, Butyl Acetate 1-5%, Hexamethylene Diisocyanate Monomer, (<.4%), Solvent 100, Xylene (32%).

Gallon Wt.:	8.13 lbs.	**Flash Point:**	72°F
Wt. % Solids:	43.2	**Material VOC:**	4.62 lbs./gallon
Vol. % Solids:	37.0	**Coating VOC:**	4.62 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.28 lbs./gallon

MP4085 Aliphatic Polyisocyanate Resin, Butyl Acetate 1-5%, 2-Ethyl-Hexyl Acetate, Hexamethylene Diisocyanate Monomer, (<.4%), Oxo-Octyle Acetate, Solvent 100, Xylene (32%).

Gallon Wt.:	8.13 lbs.	**Flash Point:**	72°F
Wt. % Solids:	43.2	**Material VOC:**	4.62 lbs./gallon
Vol. % Solids:	36.8	**Coating VOC:**	4.62 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.27 lbs./gallon

MPV2000 Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyonate Monomer (.05%), Butyl Acetate, Chlorobenzotriflouride, Solvent 100, Xylene (15%).

Gallon Wt.:	9.68 lbs.	**Flash Point:**	72°F
Wt. % Solids:	35.0	**Material VOC:**	1.82 lbs./gallon
Vol. % Solids:	35.0	**Coating VOC:**	3.04 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	1.159 lbs./gallon

Federally Exempt Solvent = 39.98% by volume

MPV2165 Aliphatic Polyisocyanate Resin, Butyl Acetate 1-5%, Chlorobenzotriflouride, Hexamethylene Diisocyonate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Solvent 100, Xylene (18%), Methyl Isobutyl Ketone (14%).

Gallon Wt.:	8.73 lbs.	**Flash Point:**	45°F
Wt. % Solids:	38.80	**Material VOC:**	3.29 lbs./gallon
Vol. % Solids:	34.90	**Coating VOC:**	4.03 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.04 lbs./gallon

Federally Exempt Solvent = 18.40% by volume

PA3040E Polyamide Resin, Butanol 45-50%, Heptane, Chlorobenzotriflouride, Acetone 5-10%.

Gallon Wt.:	7.2 lbs.	**Flash Point:**	0°F
Wt. % Solids:	13.40	**Material VOC:**	4.60 lbs./gallon
Vol. % Solids:	11.80	**Coating VOC:**	5.60 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.03 lbs./gallon

Federally Exempt solvent = 17.96% by Volume

PA3040V Polyamide Resin, Acetone, Butanol (7.8%), Chlorobenzotriflouride, Methyl Isobutyl Ketone (3.1%).

Gallon Wt.:	7.97 lbs.	**Flash Point:**	0°F
Wt. % Solids:	13.20	**Material VOC:**	0.86 lbs./gallon
Vol. % Solids:	12.30	**Coating VOC:**	3.43 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.89 lbs./gallon

Federally Exempt solvent = 74.89% by Volume

PA3050F Alphatic Poly Isocyanate Resin, Hexamethylene Diidocyanate, Butyl Acetate 1-5%, Ethyl 3-Ethoxy Propionate, Methoxy Propyl Acetate, Methyl Ethyl Ketone 20-25%, Toluene (3.5%), Xylene (6.4%).

Gallon Wt.:	7.98 lbs.	**Flash Point:**	24°F
Wt. % Solids:	38.7	**Material VOC:**	4.89 lbs./gallon
Vol. % Solids:	32.8	**Coating VOC:**	4.89 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.28 lbs./gallon

PA3050M Alphatic Poly Isocyanate Resin, Hexamethylene Diisocyanate, Butyl Acetate 15-20%, Ethyl 3-Ethoxy Propionate, Methoxy Propyl Acetate, Methyl Ethyl Ketone 1-5%, Xylene 6.4%.

Gallon Wt.:	8.18 lbs.	**Flash Point:**	24°F
Wt. % Solids:	38.7	**Material VOC:**	5.01 lbs./gallon
Vol. % Solids:	33.7	**Coating VOC:**	5.01 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.55 lbs./gallon

PA3120M Ketimine Resin, Methyl Isobutyl Ketone (1.5%), N-Butyl Alcohol 1-5%, Xylene (14%), Toluene (52%).

Gallon Wt.:	7.59 lbs.	**Flash Point:**	60°F
Wt. % Solids:	33.0	**Material VOC:**	5.09 lbs./gallon
Vol. % Solids:	29.7	**Coating VOC:**	5.09 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.22 lbs./gallon

PA3120S Ketimine Resin, Methyl Isobutyl Ketone (1.4%), Butyl Alcohol (2.1%), Xylene (13%), Solvent 100.

Gallon Wt.:	7.61 lbs.	**Flash Point:**	60°F
Wt. % Solids:	33.0	**Actual VOC:**	5.10 lbs./gallon
Vol. % Solids:	29.7	**Regulatory VOC:**	5.10 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.24 lbs./gallon

PA3200M Butyl Acetate, Ketimine Resin, Methyl Isobutyl Ketone (1.7%), N-Butanol (2.8%), Xylene (48.5%)

Gallon Wt.:	7.71 lbs.	**Flash Point:**	60°F
Wt. % Solids:	42.42	**Actual VOC:**	4.44 lbs./gallon(532g/L)
Vol. % Solids:	38.5	**Regulatory VOC:**	4.44 lbs./gallon(532g/L)
OSHA Storage:	1B	**Solvent Density:**	7.22 lbs./gallon

PA3200S Butyl Acetate, Ketimine Resin,Methyl, Isobutyl Ketone(1.7%), N Butanol(2.8%), N Pentyl Propionate, Solvent 100, Xylene(17%)

Gallon Wt.:	7.71 lbs.	**Flash Point:**	60°F
Wt. % Solids:	42.43	**Actual VOC:**	4.44lbs./gallon(532g/L)
Vol. % Solids:	38.5	**Regulatory VOC:**	4.44 lbs./gallon(532g/L)
OSHA Storage:	1B	**Solvent Density:**	7.21 lbs./gallon

PA3400M Chlorobenzotriflouride, Ketimine Resin, Methyl Acetate, Methyl Isobutyl Ketone(1.5%), N-Butanol(2.3%), Xylene(14%)

Gallon Wt.:	8.85 lbs.	**Flash Point:**	0°F
Wt. % Solids:	35.4	**Actual VOC:**	1.61 lbs./gallon(193g/L)
Vol. % Solids:	36.9	**Regulatory VOC:**	2.71 lbs./gallon(325g/L)
OSHA Storage:	1B	**Solvent Density:**	9.06 lbs./gallon

Federally Exempt Solvent = 40.47% by Volume

PA3400S Chlorobenzotriflouride, Ketimine Resin, Methyl Acetate, Methyl Isobutyl Ketone(1.4%), N-Butanol(2.3%), Xylene(14%)

Gallon Wt.:	9.13 lbs.	**Flash Point:**	0°F
Wt. % Solids:	34.3	**Actual VOC:**	1.61lbs./gallon(193g/L)
Vol. % Solids:	36.9	**Regulatory VOC:**	2.71 lbs./gallon(325g/L)
OSHA Storage:	1B	**Solvent Density:**	9.50 lbs./gallon

Federally Exempt Solvent = 40.47% by Volume

PO21A Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Isophorone Diisocyanate Resin (< .35%), Butyl Acetate 1-5%, Solvent 100, Chlorobenzotriflouride.

Gallon Wt.:	9.86 lbs.	**Flash Point:**	78°F
Wt. % Solids:	54.28	**Material VOC:**	0.89 lbs./gallon
Vol. % Solids:	55.50	**Coating VOC:**	1.31 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	10.13 lbs./gallon

Federally Exempt Solvent = 32.37% by Volume

PO28AN Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (<.05%), Isophorone Diisocyanate Resin (< .35%), Chlorobenzotriflouride, Methyl Amyl Ketone 1-5%.

Gallon Wt.:	9.93 lbs.	**Flash Point:**	72°F
Wt. % Solids:	61.07	**Material VOC:**	0.50 lbs./gallon
Vol. % Solids:	63.10	**Coating VOC:**	0.71 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	9.57 lbs./gallon

Federally Exempt Solvent = 30.13% by Volume

PO35AN Aliphatic Polyisocyanate Resin (.04%), Hexamethylene Diisocyanate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), Xylene (20%), Solvent 100, Butyl Acetate 1-5%.

Gallon Wt.:	8.85 lbs.	**Flash Point:**	78°F
Wt. % Solids:	73.35	**Material VOC:**	2.36 lbs./gallon
Vol. % Solids:	67.50	**Coating VOC:**	2.36 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.26 lbs./gallon

PO35AS Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.04%), Isophorone Diisocyanate Resin (< .35%), N-Pentyl Propionate, Xylene (9.5%), Butyl Acetate 1-5%, Solvent 100.

Gallon Wt.:	8.86 lbs.	**Flash Point:**	78°F
Wt. % Solids:	73.32	**Material VOC:**	2.36 lbs./gallon
Vol. % Solids:	67.49	**Coating VOC:**	2.36 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.23 lbs./gallon

PS5008B Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer, (.04%), Toluene (29%), Methyl Isobutyl Ketone (29%), Butyl Acetate 5.2%, Xylene (5.2%).

Gallon Wt.:	7.64 lbs.	**Flash Point:**	45°F
Wt. % Solids:	31.63	**Material VOC:**	5.22 lbs./gallon
Vol. % Solids:	25.40	**Coating VOC:**	5.22 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	7.00 lbs./gallon

PS5012B Aliphatic Polyisocyanate Resin, Hexamethylene Diisocyanate Monomer (.05%), Chlorobenzotriflouride, Methyl Isobutyl Ketone (2.5%).

Gallon Wt.:	10.57 lbs.	**Flash Point:**	50°F
Wt. % Solids:	23.00	**Material VOC:**	0.27 lbs./gallon
Vol. % Solids:	25.60	**Coating VOC:**	0.90 lbs./gallon
OSHA Storage:	1B	**Solvent Density:**	10.94 lbs./gallon

Federally Exempt Solvent = 70.42% by Volume

*** Isophorone Diisocyanate:** WT % reporting is based on monomer content.

Xylene: when present it can be assumed 18-20% of the Wt. % reported is Ethylbenzene**.**

Flash Point: Determined by TCC, expressed in degrees Fahrenheit.

Coating VOC: $\frac{W_S - W_W - W_{EX}}{V_T - V_W - V_{EX}}$ Reperesents VOC per EPA Method 24.

Material VOC: $\mathbf{w_S - w_W - w_{EX}}$

Where: W_S = total solvent weight; W_W = weight of water; W_{EX} = weight of exempt solvent; V_{EX} = volume of exempt solvent; V_W = volume of water; V_T = total volume

Warning: KEEP THIS AND ALL PAINT RELATED PRODUCTS OUT OF THE REACH OF CHILDREN!

The information contained in this MSDS is based on data from sources considered to be reliable but ChemSpec USA, Inc. does not guarantee the accuracy or completeness thereof. ChemSpec USA, Inc. urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire prevention as necessary or appropriate to use and understand the data in this MSDS.

Note: The data on this MSDS relates only to individual components and does not represent the end mixed product. Read all other Component Material Safety Data Sheets.

END OF MSDS

Material Safety Data Sheet

Date of issue 22 May 2013
Version 14

1 . Product and company identification

Product name : URETHANE REDUCER MEDIUM
Code : 1370
Supplier : Grow Automotive
760 Pittsburgh Drive
Delaware, OH 43015
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 1-800-647-6050

2 . Hazards identification

Emergency overview : DANGER!

FLAMMABLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor. Keep away from heat. Do not smoke. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.
Ingestion : May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Skin : May cause skin dryness and irritation.
Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3 . Composition/information on ingredients

Name	CAS number	%
n-butyl acetate	123-86-4	30 - 60
ethyl acetate	141-78-6	10 - 30
toluene	108-88-3	10 - 30
2-methoxy-1-methylethyl acetate	108-65-6	7 - 13

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	IPEL
n-butyl acetate	TWA	150 ppm	150 ppm	150 ppm	150 ppm	Not established
	STEL	200 ppm	Not established	200 ppm	200 ppm	Not established
ethyl acetate	TWA	400 ppm	400 ppm	400 ppm	400 ppm	Not established
toluene	TWA	20 ppm	200 ppm Z	20 ppm	50 ppm S	Not established
	STEL	Not established	500 ppm Z A 300 ppm Z C	Not established	Not established	Not established
2-methoxy-1-methylethyl acetate	TWA	Not established	Not established	50 ppm	Not established	50 ppm

8 . Exposure controls/personal protection

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	STEL	=	Short term Exposure limit values
IPEL	=	Internal Permissible Exposure Limit	TD	=	Total dust
OSHA	=	Occupational Safety and Health Administration.	TLV	=	Threshold Limit Value
R	=	Respirable	TWA	=	Time Weighted Average
Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances			

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Open cup: 12.22°C (54°F)
Explosion limits : Lower: 1.8%
Color : Not available.
Odor : Not available.
pH : Not available.
Boiling/condensation point : >37.78°C (>100°F)
Melting/freezing point : Not available.
Specific gravity : 0.89
Density (lbs / gal) : 7.43
Vapor pressure : 4.1 kPa (30.8 mm Hg) [room temperature]
Vapor density : Not available.
Volatility : 100% (v/v), 100% (w/w)
Evaporation rate : 252 (butyl acetate = 1)
Partition coefficient: n-octanol/water : Not available.
% Solid. (w/w) : 0

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Materials to avoid : Reactive or incompatible with the following materials:,oxidizing materials,strong acids, strong alkalis
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-butyl acetate	LD50 Oral	Rat	10.768 g/kg	-
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LC50 Inhalation	Rat	>21.1 mg/l	4 hours
ethyl acetate	LD50 Oral	Rat	5620 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
toluene	LD50 Oral	Rat	636 mg/kg	-
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LC50 Inhalation	Rat	49 g/m3	4 hours
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: brain.
Contains material which may cause damage to the following organs: blood, kidneys, the reproductive system, liver, heart, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

11 . Toxicological information

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
toluene	A4	3	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

Teratogenicity

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : Contains material which may impair female fertility, based on animal data.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
n-butyl acetate	Acute LC50 18000 to 19000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
ethyl acetate	Acute LC50 230000 to 250000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 560000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Acute EC50 1800000 to 3200000 ug/L Fresh water	Algae - Green algae - Selenastrum sp.	72 hours
toluene	Acute LC50 5800 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute EC50 6000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 28000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

13 . Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1263	PAINT RELATED MATERIAL	3	II	-
IMDG	1263	PAINT RELATED MATERIAL	3	II	-
DOT	1263	PAINT RELATED MATERIAL	3	II	Reportable quantity 5157.6 lbs / 2341.5 kg [695. 15 gal / 2631.4 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: toluene: 1000 lbs. (454 kg); ethyl acetate: 5000 lbs. (2270 kg); butan-1-ol: 5000 lbs. (2270 kg); n-butyl acetate: 5000 lbs. (2270 kg);

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : All components are listed or exempted.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : All components are listed or exempted.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand (NZIoC) : Substance Use Restricted
Philippines inventory (PICCS) : All components are listed or exempted.

United States

U.S. Federal regulations :

SARA 302/304: No products were found.
CERCLA: Hazardous substances.: toluene: 1000 lbs. (454 kg); ethyl acetate: 5000 lbs. (2270 kg); butan-1-ol: 5000 lbs. (2270 kg); n-butyl acetate: 5000 lbs. (2270 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
n-butyl acetate	123-86-4	Y	N	Y	N	N
ethyl acetate	141-78-6	Y	N	Y	N	N
toluene	108-88-3	Y	Y	Y	N	N
2-methoxy-1-methylethyl acetate	108-65-6	Y	N	Y	N	N
Product as-supplied :		Y	Y	Y	N	N

SARA 313	Chemical name	CAS number	Concentration
Supplier notification :	toluene	108-88-3	10 - 30

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

15 . Regulatory information

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 3 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 3 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 3 **Instability** : 0

Date of previous issue : **6/27/2011.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Safety Data Sheet

Document Group:	24-6835-3	**Version Number:**	6.01
Issue Date:	12/15/15	**Supercedes Date:**	12/14/15

SECTION 1: Identification

1.1. Product identifier
3M™ Golden Extra 01127, 01177, 01277, 01317, 31177

Product Identification Numbers
70-0080-0110-2

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Body Filler

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification
Flammable Liquid: Category 3.
Serious Eye Damage/Irritation: Category 2B.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements
Signal word
Danger

Symbols

Flame | Health Hazard |

Pictograms

Hazard Statements
Flammable liquid and vapor.

Causes eye irritation.
May cause cancer.

Causes damage to organs:
liver |
sensory organs |

Causes damage to organs through prolonged or repeated exposure:
respiratory system |
sensory organs |

May cause damage to organs through prolonged or repeated exposure:
liver |

Precautionary Statements
General:
Keep out of reach of children.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

41% of the mixture consists of ingredients of unknown acute dermal toxicity.
32% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Chlorite (Mineral)	1318-59-8	0 - 2 Trade Secret *
Polyester Resin	Trade Secret*	15 - 40 Trade Secret *
Styrene Monomer	100-42-5	10 - 30 Trade Secret *
Talc	14807-96-6	10 - 30 Trade Secret *
Limestone	1317-65-3	10 - 30 Trade Secret *
Magnesium Carbonate	546-93-0	7 - 13 Trade Secret *
Inert Filler	Trade Secret*	3 - 7 Trade Secret *
Thickening Agent	Trade Secret*	1 - 5 Trade Secret *
Titanium Dioxide	13463-67-7	< 1 Trade Secret *
Quartz Silica	14808-60-7	< 0.5 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Styrene Monomer	100-42-5	ACGIH	TWA:20 ppm;STEL:40 ppm	A4: Not class. as human carcin
Styrene Monomer	100-42-5	OSHA	TWA:100 ppm;CEIL:200 ppm	
Limestone	1317-65-3	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m3	
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Talc	14807-96-6	OSHA	TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.);TWA:20 millions of particles/cu. ft.	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
Talc	14807-96-6	CMRG	TWA(as respirable dust):0.5 mg/m3	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz Silica	14808-60-7	OSHA	TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.)	
Magnesium Carbonate	546-93-0	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Inert Filler	Trade Secret	Manufacturer determined	TWA(as dust):10 mg/m3	
Inert Filler	Trade Secret	ACGIH	TWA(as fiber):0.2 fiber/cc	A2: Suspected human carcin.

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure

Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Fluoroelastomer

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Paste
Odor, Color, Grade:	Pungent Styrene Odor Yellow paste
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point	*No Data Available*
Boiling Point	293 ºF
Flash Point	88 ºF [*Test Method:* Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.1 % [*Details:* based on styrene]
Flammable Limits(UEL)	6.8 % [*Details:* based on styrene]
Vapor Pressure	4.5 mmHg
Vapor Density	>= 1 [*Ref Std:* AIR=1]
Density	1.146 g/ml
Specific Gravity	1.146 [*Ref Std:* WATER=1]
Solubility in Water	Negligible
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	172,000 - 192,000 centipoise
Hazardous Air Pollutants	0.308 lb HAPS/lb solids [*Test Method:* Calculated]
Volatile Organic Compounds	16.7 % weight [*Test Method:* calculated per CARB title 2]

Volatile Organic Compounds	191 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Percent volatile	17.2 % weight
Percent volatile	20.09 % volume
VOC Less H2O & Exempt Solvents	192 g/l [*Test Method:* calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable. Stable under normal conditions. May become unstable at elevated temperatures and/or pressure.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur. Hazardous polymerization may occur at temperatures over 150ºF

10.4. Conditions to avoid
Sparks and/or flames
Heat

10.5. Incompatible materials
Strong oxidizing agents
Strong acids
Alkali and alkaline earth metals
Strong bases

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
May be harmful if inhaled.
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:
May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Prolonged or repeated exposure may cause target organ effects:
Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Inert Filler	Trade Secret	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Inert Filler	Trade Secret	Anticipated human carcinogen	National Toxicology Program Carcinogens
Inert Filler	Trade Secret	Anticipated human carcinogen	National Toxicology Program Carcinogens
Quartz Silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Styrene Monomer	100-42-5	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Styrene Monomer	100-42-5	Anticipated human carcinogen	National Toxicology Program Carcinogens
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE 20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Polyester Resin	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg

Limestone	Dermal	Rat	LD50 > 2,000 mg/kg
Limestone	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Limestone	Ingestion	Rat	LD50 6,450 mg/kg
Styrene Monomer	Dermal	Rat	LD50 > 2,000 mg/kg
Styrene Monomer	Inhalation-Vapor (4 hours)	Rat	LC50 8.3 mg/l
Styrene Monomer	Ingestion	Rat	LD50 5,000 mg/kg
Magnesium Carbonate	Ingestion	Mouse	LD50 > 5,000 mg/kg
Inert Filler	Dermal		LD50 estimated to be > 5,000 mg/kg
Inert Filler	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Thickening Agent	Dermal		LD50 estimated to be > 5,000 mg/kg
Thickening Agent	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.6 mg/l
Thickening Agent	Ingestion	Rat	LD50 > 5,000 mg/kg
Chlorite (Mineral)	Dermal		LD50 estimated to be > 5,000 mg/kg
Chlorite (Mineral)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Talc	Rabbit	No significant irritation
Limestone	Rabbit	No significant irritation
Styrene Monomer	official classification	Mild irritant
Magnesium Carbonate	In vitro data	Minimal irritation
Inert Filler	Professional judgement	No significant irritation
Thickening Agent	Rat	No significant irritation
Chlorite (Mineral)	Professional judgement	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Quartz Silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Talc	Rabbit	No significant irritation
Limestone	Rabbit	No significant irritation
Styrene Monomer	official classification	Moderate irritant
Magnesium Carbonate	Rabbit	Mild irritant

Inert Filler	Professional judgement	No significant irritation
Thickening Agent	Rabbit	No significant irritation
Chlorite (Mineral)	Professional judgement	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Styrene Monomer	Guinea pig	Not sensitizing
Titanium Dioxide	Human and animal	Not sensitizing

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Styrene Monomer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Styrene Monomer	In vivo	Some positive data exist, but the data are not sufficient for classification
Inert Filler	In Vitro	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Styrene Monomer	Ingestion	Mouse	Carcinogenic
Styrene Monomer	Inhalation	Human and animal	Carcinogenic
Inert Filler	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Quartz Silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesis
Limestone	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Styrene Monomer	Ingestion	Not toxic to female reproduction	Rat	NOAEL 21 mg/kg/day	3 generation
Styrene Monomer	Inhalation	Not toxic to female reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Inhalation	Not toxic to male reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	60 days
Styrene Monomer	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	during gestation
Styrene Monomer	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2.1 mg/l	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Limestone	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes
Styrene Monomer	Inhalation	auditory system	Causes damage to organs	Multiple animal species	LOAEL 4.3 mg/l	not available
Styrene Monomer	Inhalation	liver	Causes damage to organs	Mouse	LOAEL 2.1 mg/l	not available
Styrene Monomer	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Styrene Monomer	Inhalation	endocrine system	All data are negative	Rat	NOAEL Not available	not available
Styrene Monomer	Inhalation	kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 2.1 mg/l	not available

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis | respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 weeks
Limestone	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Multiple animal species	NOAEL 1.3 mg/l	not available
Styrene Monomer	Inhalation	liver	May cause damage to organs though prolonged or repeated exposure	Mouse	LOAEL 0.85 mg/l	13 weeks

Styrene Monomer	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 1.1 mg/l	not available
Styrene Monomer	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.85 mg/l	7 days
Styrene Monomer	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.6 mg/l	10 days
Styrene Monomer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 0.09 mg/l	not available
Styrene Monomer	Inhalation	heart | bone, teeth, nails, and/or hair | muscles | kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 4.3 mg/l	2 years
Styrene Monomer	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 500 mg/kg/day	8 weeks
Styrene Monomer	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
Styrene Monomer	Ingestion	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 677 mg/kg/day	6 months
Styrene Monomer	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 600 mg/kg/day	470 days
Styrene Monomer	Ingestion	heart | respiratory system	All data are negative	Rat	NOAEL 35 mg/kg/day	105 weeks
Inert Filler	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Styrene Monomer	100-42-5	Trade Secret 10 - 30

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Classification
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	None	Carcinogen
Titanium Dioxide	13463-67-7	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 1 **Flammability:** 3 **Instability:** 1 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	24-6835-3	**Version Number:**	6.01
Issue Date:	12/15/15	**Supercedes Date:**	12/14/15

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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3M USA SDSs are available at www.3M.com

MATERIAL SAFETY DATA SHEET
COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: DX330

PRODUCT TRADE NAME: WAX AND GREASE REMOVER

REVISION DATE: 01/05/99 (000) 0808

CUSTOMER PART #/NAME: Not applicable

CHEMICAL FAMILY: SOLVENT BLEND

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 01-800-00-21-400 (MEXICO)

TECHNICAL INFORMATION: (440) 572-2800

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA 15101 (412) 492-5555

DATE OF MSDS PREPARATION: 02/26/02

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. May cause slight skin irritation. Causes eye irritation. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

TRANSPORTATION OF DANGEROUS GOODS

PROPER SHIPPING NAME: Paint Related Material

NOS TECHNICAL NAME: None

HAZARD CLASS: 3

SUBSIDIARY CLASS: None

UN NUMBER: UN1263

PACKING GROUP: II

MARINE POLLUTANT: None

USA-RQ, HAZARDOUS SUBSTANCE: None

USA-RQ, HAZARDOUS SUBSTANCE THRESHOLD SHIP WEIGHT: None

CANADA SCHEDULE XIII, 9.2:

CANADA SCHEDULE XIII,9.2 THRESHOLD SHIP WEIGHT:

Canada Shipments Only - Canada Schedule XIII Threshold Ship Weight: This is the total weight of this product that must be shipped to exceed the Canadian Schedule XIII Regulated Limit quantity.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	METHYLCYCLOHEXANE	5 - <10	108-87-2	
02	TOLUENE	1 - <5	108-88-3	
03	N-HEPTANE	5 - <10	142-82-5	
04	NAPHTHA	70- <80	64742-48-9	
05	NAPHTHA	5 - <10	64742-89-8	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
01	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
02	1000 lbs	NOT ESTAB	Y	Y	N	Y	N	N
03	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
04	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
05	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= Y, CHRONIC= N, FLAMMABILITY= Y, PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH TLV-TWA	ACGIH TLV-STEL	U.S. OSHA PEL-TWA	U.S. OSHA PEL-STEL
01	400 ppm	NOT ESTAB	400 ppm	NOT ESTAB
02	S- 50 ppm	NOT ESTAB	100 ppm	150 ppm
03	400 ppm	500 ppm	400 ppm	500 ppm
04	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB
05	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust]

REF	ACGIH TLV - BASIS - CRITICAL EFFECT(S)
01	narcosis; irritation
02	CNS
03	irritation; narcosis
04	NOT ESTAB.
05	NOT ESTAB.

[ACGIH TLV BASIS - CRITICAL EFFECT(S): CNS-CENTRAL NERVOUS SYSTEM; CVS-CARDIOVASCULAR SYSTEM; CWP-COAL WORKER'S PNEUMOCONIOSIS; GI-GASTROINTESTINAL] [NOT ESTAB.= NOT ESTABLISHED = NOT APPLICABLE] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.
SKIN CONTACT: May cause slight skin irritation.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

SECTION 4 - FIRST AID MEASURES

IMPORTANT FIRST AID INFORMATION: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

INGESTION: Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

EYE CONTACT: Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT: Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION: Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: 60 Degrees F (15 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.0

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors,

static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: neoprene rubber or nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section

2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 199- 351Degrees F

SOLUBILITY IN WATER: .0 %

VAPOR PRESSURE: 16.2 mmHg

WEIGHT/GALLON (LBS): 6.36 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not determined

% VOLATILE/VOLUME: 100.000

% SOLIDS BY WEIGHT: .00

SPECIFIC GRAVITY: .763

EVAPORATION RATE(BuOAc=100): 75

ODOR/APPEARANCE: Non-viscous liquid with an odor characteristic of the ingredients listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	2	HEALTH	2
FLAMMABILITY	3	FLAMMABILITY	3
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: DX330 (00137950.009DX330)

Manufactured and Supplied by:

REFINISH PRODUCTS

19699 PROGRESS DRIVE

STRONGSVILLE, OH 44149

SECTION 1 - PRODUCT AND COMPANY INFORMATION

Grow Automotive Refinish Products
19699 Progress Drive
Strongsville, OH 44149
Grow Automotive Finishes is part of PPG Industries, Inc.

EMERGENCY PHONE NUMBERS (24 hours/day): **(412) 434-4515 (U.S.)**
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-3889090 (China)

TECHNICAL INFORMATION: (440) 572-2800 (STRONGSVILLE OHIO) 8:00 a.m. - 5:00 p.m. EST

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST

Product ID: ADV-193 (0808)
PRODUCT NAME: WAX,GREASE,SILICONE REMOVER
SYNONYMS: None
ISSUE DATE: 09/20/2004
EDITION NO.: 3
CHEMICAL FAMILY: SOLVENT

EMERGENCY OVERVIEW:

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone.CAUSES EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN.VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT.HARMFUL IF SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
V.M. AND P. NAPHTHA 8032-32-4	60- 100	X	
NAPHTHA 64742-88-7	10 - 30	X	
TOLUENE 108-88-3	3 - 7	X	
ISOPROPYL ALCOHOL 67-63-0	3 - 7	X	
[As Rubber solvent (Naphtha)] 8032-32-4	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:
Causes eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:
May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:
May be absorbed through the skin.

INHALATION:
Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

INGESTION:
Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:
Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS
Avoid long-term and repeated contact.
Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.
The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:
Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:
Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:
Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:
Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASHPOINT: 43 Degrees F (6 Degrees C)
FLASHPOINT TEST METHOD:
Pensky-Martens Closed Cup
UEL: Not Available.
LEL: 1.0
AUTOIGNITION TEMPERATURE:
Not Available.

EXTINGUISHING MEDIA:
Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:
Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:
Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:
Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:
Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:
Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:
Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: neoprene rubber or nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:
Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS
If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
V.M. AND P. NAPHTHA 8032-32-4	60- 100	300 ppm	Not established	300 ppm	400 ppm
TOLUENE 108-88-3	3 - 7	S- 50 ppm	Not established	100 ppm	150 ppm
ISOPROPYL ALCOHOL 67-63-0	3 - 7	200 PPM	400 PPM	400 ppm	500 ppm
[As Rubber solvent (Naphtha)] 8032-32-4	*	Not Listed	Not Listed	Not Listed	Not Listed

Key: OSHA=Occupational Safety and Health Administration; PEL=Permissable Exposure Limit; Ceiling=PEL Ceiling Limit; STEL=PEL Short-Term Exposure Limit; Skin=OSHA Skin Designation.

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
V.M. AND P. NAPHTHA 8032-32-4	60- 100	500 MG/m^3	Not established	Not established	Not established
NAPHTHA 64742-88-7	10 - 30	525 MG/m^3	Not established	Not established	Not established
TOLUENE 108-88-3	3 - 7	50 PPM	Not established	Not established	Not established
ISOPROPYL ALCOHOL 67-63-0	3 - 7	400 ppm	500 ppm	Not established	Not established
[As Rubber solvent (Naphtha)] 8032-32-4	*	1600MG/m^3	Not Listed	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit; IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Aborption; R-Respirable Dust]
Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY:	.766
PHYSICAL STATE:	Liquid
Percent Solids:	.00
Percent Volatile by Volume:	100.000

pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 17.9 mmHg
ODOR/APPEARANCE: Non-viscous liquid with an odor characteristic of the ingredients listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 138
BOILING POINT OR RANGE: 180- 372Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Octanol/Water Partition Coefficient: Not Applicable.
WEIGHT PER GALLON: 6.38 (U.S.) / 7.6 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
TOLUENE 108-88-3	3 - 7	5.00 g/kg	12.12 g/kg	Not Available
ISOPROPYL ALCOHOL 67-63-0	3 - 7	5.84 g/kg	13.00 g/kg	Not Available

CHRONIC TOXICITY
Target Organs:
- Teratogen - Brain - Central nervous system - Lung

Mutagenicity Toxicity:
This has not been tested for this product.
Reproductive Toxicity:
This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS
Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE
Mobility: No Information Available.
Biodegradation: No Information Available.
Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No Information Available.
Photolysis: No Information Available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.
Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint Related Material
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: II

USA - RQ Hazardous Substances: Toluene
USA-RQ Hazardous Substance Threshold Ship Weight: Toluene>17699.29 Pounds
Marine Pollutant Name: None
USA Shipments Only - RQ Threshold Ship Weight: This is the total weight of this product that must be shipped to exceed the RQ quantity.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS
U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.
FEDERAL REGULATIONS
US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
V.M. AND P. NAPHTHA 8032-32-4	60- 100	Not Listed	Not Listed	Not Listed
NAPHTHA 64742-88-7	10 - 30	Not Listed	Not Listed	Not Listed
TOLUENE 108-88-3	3 - 7	1000 lbs	Not Listed	Listed
ISOPROPYL ALCOHOL 67-63-0	3 - 7	Not Listed	Not Listed	Not Listed

SARA 311/312
Health (acute): Yes
Health (chronic): No
Fire (flammable): Yes
Pressure: No
Reactivity: No
WHMIS HAZARD CLASS: - Class B, Division 2 - Class D, Division 2, Subdivision A

STATE/PROVINCIAL REGULATIONS
CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Additional Information
Key: IARC- International Agency on the Research of Cancer; ACGIH-American Conference of Governmental Industrial Hygienists; NTP-National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA-Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems
NFPA Rating: 2 30
HMIS Rating: 2 30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department
REASON FOR REVISION: Section 2 has been updated. Changes to this section may also result in changes in sections 8, 11 and/or 15. Section 5 has been updated. Section 9 has been updated. Date. Edition. Updated MSDS format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.
Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
1705 000002 (00304409.001)(09/20/04)
040916, 000, 0808

*** END OF MSDS ***

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: Eastman(TM) MAK

Product No.: EAN 902185. 00133-00, P0013307, P0013308, P0013300, P0013301, P0013305, P0013309, P0013310, P0013311, P0013312

Synonyms, Trade Names: 00133-00

Additional identification

Chemical name:	methyl amyl ketone
CAS-No.:	110-43-0

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Solvent

Uses advised against: None known.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

Eastman Chemical Company
200 South Wilcox Drive
Kingsport, TN 37660-5280 US
+14232292000

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

Emergency telephone number:

For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

SECTION 2: Hazards identification

Hazard classification:

Physical hazards

Flammable liquids	Category 3

Health hazards

Acute toxicity (Inhalation)	Category 4
Acute toxicity (Oral)	Category 4
Specific target organ toxicity - single exposure	Category 3

OSHA Specified Hazards: not applicable

Warning label items including precautionary statement:

Pictogram:

Signal words: WARNING!

Hazard Statement(s):
H226: Flammable liquid and vapor.
H332: Harmful if inhaled.
H302: Harmful if swallowed.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.

Precautionary statement:

Prevention:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.

Response:
P370+P378: In case of fire; Use water spray, carbon dioxide, dry chemical or alcohol foam for extinction.
P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330: Rinse mouth.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P235: Keep cool.
P405: Store locked up.

Disposal:
P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None known.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
methyl n-amyl ketone	100%	CAS-No.: 110-43-0	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
# This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation: Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms occur. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

Skin contact: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: Call a physician or poison control center immediately. Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration.

Most important symptoms and effects, both acute and delayed: May irritate and cause redness and pain. Narcotic effect. Respiratory tract irritation.

Indication of any immediate medical attention and special treatment needed

Hazards: Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards: Combustible liquid and vapor. USE WATER WITH CAUTION. Material will float and may ignite on surface of water.

Extinguishing media

Suitable extinguishing media: Water spray. Dry chemical. Carbon Dioxide. Foam.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture: Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

Advice for firefighters

Special fire fighting procedures: Water may be ineffective in fighting the fire. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment.

Environmental precautions: Avoid release to the environment.

Methods and material for containment and cleaning up: Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Use water spray to disperse vapors and flush spill area. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling: Avoid breathing mists or vapors. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed and in a well-ventilated place.

Specific end use(s): Solvent

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Country specific exposure limits have not been established or are not applicable unless listed below.

Chemical name	Type	Exposure Limit values	Source
heptan-2-one; methyl amyl ketone	TWA	50 ppm	US. ACGIH Threshold Limit Values (01 2010)
	PEL	100 ppm 465 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Exposure controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information:	Eye bath. Safety shower. Washing facilities.
Eye/face protection:	It is a good industrial hygiene practice to minimize eye contact.
Skin protection	
Hand protection:	It is a good industrial hygiene practice to minimize skin contact.
Other:	No data available.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
Hygiene measures:	Observe good industrial hygiene practices.
Environmental Controls:	No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	
Physical State:	Liquid
Form:	Liquid
Color:	Colorless
Odor:	Pungent, Sweet
Odor Threshold:	0.2 ppm
pH:	No data available.
Melting Point	-36 °C
Boiling Point:	152 °C
Flash Point:	39 °C (Tag closed cup)
Evaporation Rate:	0.34
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)–:	No data available.
Flammability Limit - Lower (%)–:	No data available.
Vapor pressure:	2.8 mbar (20 °C)
Vapor density (air=1):	3.9
Specific Gravity:	0.81 (20 °C)
Solubility(ies)	
Solubility in Water:	Slightly Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Pow: 95.4 log Pow: 1.98

Autoignition Temperature:	393 °C (ASTM D2155)
Decomposition Temperature:	(DTA) No exotherm to boiling
Dynamic Viscosity:	No data available.
Kinematic viscosity:	Not determined.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

SECTION 10: Stability and reactivity

Reactivity:	None known.
Chemical stability:	Stable
Possibility of hazardous reactions:	None known.
Conditions to avoid:	Heat, sparks, flames.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon Dioxide. Carbon Monoxide.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.
Ingestion:	Harmful if swallowed.
Skin contact:	None known.
Eye contact:	None known.

Information on toxicological effects

Acute Toxicity

Oral

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	Oral LD-50: (Rat): 1,600 mg/kg

Dermal

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	Dermal LD-50: (Rat): > 2,000 mg/kg

Inhalation

Product:	No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone	LC50 (Rat, 4 h): > 16.7 mg/l

Repeated dose toxicity

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	No data available.

Skin corrosion/irritation:

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	(Rabbit, 24 h): moderate

Serious eye damage/eye irritation:

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	(Rabbit, 24 h): slight

Respiratory or skin sensitization:

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	Skin Sensitization:, (Mouse) - non-sensitizing

Mutagenicity

In vitro

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	No data available.

In vivo

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	No data available.

Carcinogenicity

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	No data available.

Reproductive toxicity

Product:	No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone — No data available.

Specific target organ toxicity - single exposure

Product: No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone — No data available.

Specific target organ toxicity - repeated exposure

Product: No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone — No data available.

Aspiration hazard

Product: No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone — May be harmful if swallowed and enters airways.

Other adverse effects: No data available.

SECTION 12: Ecological information

Toxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone — LC-50 (Fathead Minnow, 96 h): 131 mg/l

Aquatic invertebrates

Product: No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone — No data available.

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone — No data available.

Aquatic invertebrates

Product: No data available.

Specified substance(s)

heptan-2-one; methyl amyl ketone	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	ErC50 (Selenastrum capricornutum, 72 h): 98.2 mg/l

Persistence and degradability

Biodegradation

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	69 % (28 d, Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test))

Biological Oxygen Demand:

Product	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	BOD-5: 1,770 mg/g BOD-20: 2,000 mg/g

Chemical Oxygen Demand:

Product	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	2,420 mg/g

BOD/COD ratio

Product	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	No data available.

Bioaccumulative potential

Product:	No data available.
Specified substance(s)	
heptan-2-one; methyl amyl ketone	No data available.

Mobility in soil:	No data available.

Known or predicted distribution to environmental compartments

heptan-2-one; methyl amyl ketone	No data available.

Results of PBT and vPvB assessment:	No data available.
heptan-2-one; methyl amyl ketone	No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Waste treatment methods

General information: No data available.

Disposal methods: Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT

Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities

Possible Shipping Description(s):

not regulated

UN 1110 n-Amyl methyl ketone III

IMDG - International Maritime Dangerous Goods Code

Possible Shipping Description(s):

UN 1110 n-AMYL METHYL KETONE 3 III

IATA

Possible Shipping Description(s):

UN 1110 n-Amyl methyl ketone 3 III

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled
WHMIS (Canada) Hazard Classification: B/3, D/2/B

SARA 311-312 Hazard Classification(s):
immediate (acute) health hazard
fire hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List
NONE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.KE-18303

Philippines Inventory (PICCS) : This product is listed on the Philippine Inventory or otherwise complies with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 2, Flammability - 2, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information:	Not relevant.
Key literature references and sources for data:	No data available.
Training information:	No data available.
Issue date:	07/07/2014
SDS No.:	
Disclaimer:	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Material name	**SUPER 16 PAINT GUN CLEANER**
Version #	01
Revision date	09-09-2009
CAS #	Mixture
Product Code	0300585
Manufacturer information	Superior Oil Company, Inc. 1402 North Capitol Avenue, Suite #100 Indianapolis, IN 46202 US Emergency (317) 781-4400

2. HAZARDS IDENTIFICATION

OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Causes eye irritation. Avoid contact with eyes.
Skin	This product may be harmful if it is absorbed through the skin. Irritating to skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Do not get this material in contact with skin.
Inhalation	Irritating to respiratory system. Prolonged inhalation may be harmful. Avoid breathing dust/fume/gas/mist/vapors/spray.
Ingestion	Components of the product may be absorbed into the body by ingestion. Do not ingest.
Target organs	Blood. Central nervous system. Kidney. Liver. Respiratory System. Skin. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged and may cause blood damage. These effects have not been observed in humans.
Chronic effects	Unconsciousness. Edema. Jaundice. Cyanosis. This product may be harmful if it is absorbed through the skin. Liver injury may occur. Kidney injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Prolonged skin contact may defat the skin and produce dermatitis.
Signs and symptoms	Irritation of nose and throat. Upper respiratory tract irritation. Irritation of eyes and mucous membranes. Unconsciousness. Narcosis. Cyanosis. Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Proteinuria. Defatting of the skin. Rash. Irritation.
Potential environmental effects	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Toluene	108-88-3	40 - 60
Acetone	67-64-1	10 - 20
2-Methyl-4-Pentanone	108-10-1	2.5 - 10
Acetic Acid, Butyl Ester	123-86-4	2.5 - 10
Methanol	67-56-1	2.5 - 10
Methyl Ethyl Ketone	78-93-3	2.5 - 10
Xylene (Mixed Isomers)	1330-20-7	2.5 - 10
2-Butoxyethanol	111-76-2	1 - 2.5

4. FIRST AID MEASURES

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.
Skin contact	Immediately take off all contaminated clothing. Wash off with warm water and soap. Get medical attention if irritation develops or persists.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Call a physician if breathing becomes difficult.
Ingestion	Have victim rinse mouth thoroughly with water. Do not induce vomiting without advice from poison control center. If ingestion of a large amount does occur, call a poison control center immediately.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media	Water. Foam. Dry powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
Protective equipment and precautions for firefighters	In case of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
Specific methods	In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unnecessary personnel away. Stay upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly. After removal flush contaminated area thoroughly with water.

Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

Handling

Vapors may form explosive mixtures with air. Do not handle or store near an open flame, heat or other sources of ignition. Do not smoke. All equipment used when handling the product must be grounded. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with skin. Avoid contact with eyes. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Avoid prolonged exposure. Wash thoroughly after handling. Avoid release to the environment.

Storage

The pressure in sealed containers can increase under the influence of heat. Keep away from heat and sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in cool place. Keep in a well-ventilated place. Keep container tightly closed. Keep in an area equipped with sprinklers. Keep this material away from food, drink and animal feed. Keep out of the reach of children. Use care in handling/storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

ACGIH

Components	Type	Value
2-Butoxyethanol (111-76-2)	TWA	20.0000 ppm
2-Methyl-4-Pentanone (108-10-1)	STEL	75.0000 ppm
	TWA	50.0000 ppm
Acetic Acid, Butyl Ester (123-86-4)	STEL	200.0000 ppm
	TWA	150.0000 ppm
Acetone (67-64-1)	STEL	750.0000 ppm
	TWA	500.0000 ppm
Methanol (67-56-1)	STEL	250.0000 ppm
	TWA	200.0000 ppm
Methyl Ethyl Ketone (78-93-3)	STEL	300.0000 ppm
	TWA	200.0000 ppm
Toluene (108-88-3)	TWA	20.0000 ppm
Xylene (Mixed Isomers) (1330-20-7)	STEL	150.0000 ppm
	TWA	100.0000 ppm

U.S. - OSHA

Components	Type	Value
2-Butoxyethanol (111-76-2)	PEL	50.0000 ppm
		240.0000 mg/m3
	TWA	120.0000 mg/m3
		25.0000 ppm
2-Methyl-4-Pentanone (108-10-1)	PEL	410.0000 mg/m3
		100.0000 ppm
	STEL	75.0000 ppm
		300.0000 mg/m3
	TWA	50.0000 ppm
		205.0000 mg/m3
Acetic Acid, Butyl Ester (123-86-4)	PEL	150.0000 ppm
		710.0000 mg/m3
	STEL	950.0000 mg/m3
		200.0000 ppm
	TWA	710.0000 mg/m3
		150.0000 ppm

Components	Type	Value
Acetone (67-64-1)	PEL	1000.0000 ppm 2400.0000 mg/m3
	STEL	1000.0000 ppm 2400.0000 mg/m3
	TWA	750.0000 ppm 1800.0000 mg/m3
Methanol (67-56-1)	PEL	200.0000 ppm 260.0000 mg/m3
	STEL	250.0000 ppm 325.0000 mg/m3
	TWA	200.0000 ppm 260.0000 mg/m3
Methyl Ethyl Ketone (78-93-3)	PEL	200.0000 ppm 590.0000 mg/m3
	STEL	300.0000 ppm 885.0000 mg/m3
	TWA	200.0000 ppm 590.0000 mg/m3
Toluene (108-88-3)	Ceiling	300.0000 ppm
	STEL	150.0000 ppm 560.0000 mg/m3
	TWA	100.0000 ppm 375.0000 mg/m3
Xylene (Mixed Isomers) (1330-20-7)	PEL	100.0000 ppm 435.0000 mg/m3
	STEL	150.0000 ppm 655.0000 mg/m3
	TWA	100.0000 ppm 435.0000 mg/m3

Engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection Avoid contact with eyes. Wear chemical goggles.

Skin protection Avoid contact with the skin. Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.

Respiratory protection Do not breathe dust/fume/gas/mist/vapors/spray. Wear positive pressure self-contained breathing apparatus (SCBA) when engineering controls are insufficient to maintain exposure below recommended levels.

General hygiene considerations When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance Clear.

Color Colorless.

Odor Typical Solvent.

Odor threshold Not available.

Physical state Liquid.

Form Liquid.

pH Not available.

Melting point Not available.

Freezing point Not available.

Boiling point 132.8 °F (56 °C) estimated

Flash point	24.8 °F (-4 °C) (Lowest flashing component)
Evaporation rate	> 1 (Butyl Acetate = 1)
Flammability limits in air, upper, % by volume	36.5 %
Flammability limits in air, lower, % by volume	1 %
Vapor pressure	77.99 hPa (1 hPa = 0.75006)
Vapor density	> 1 (Air = 1)
Specific gravity	0.842
Relative density	Not available.
Solubility (water)	Miscible.
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	464 °F (240 °C) estimated
Decomposition temperature	Not available.
VOC	90 %
Percent volatile	100 %

10. CHEMICAL STABILITY & REACTIVITY INFORMATION

Conditions to avoid	Heat, flames and sparks.
Incompatible materials	This product is incompatible with nitrates. Strong oxidizing agents. Strong acids. Ammonia. Amines. Peroxides. Isocyanates. Caustics.
Hazardous decomposition products	Irritants. Toxic gas.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Components	Test Results
2-Methyl-4-Pentanone (108-10-1)	Acute Dermal LD50 Rabbit: >= 16000 mg/kg
	Acute Inhalation LC50 Rat: 8.2 mg/l 4.00 Hours
	Acute Oral LD50 Rat: 2080 mg/kg
	Acute Other LD50 Guinea pig: 0.919 ml/kg
	Acute Other LD50 Mouse: 590 mg/kg
	Acute Other LD50 Rat: 1.14 ml/kg
Toluene (108-88-3)	Acute Dermal LD50 Rabbit: 12124 mg/kg
	Acute Inhalation LC50 Mouse: 400 mg/l 24.00 Hours
	Acute Inhalation LC50 Rat: 26700 mg/l 1.00 Hours
	Acute Oral LD50 Rat: 2600 - 7500 mg/kg
	Acute Other LD50 Rat: 1960 mg/kg
2-Butoxyethanol (111-76-2)	Acute Dermal LD50 Rabbit: 400 mg/kg
	Acute Inhalation LC50 Mouse: 700 mg/l 7.00 Hours
	Acute Inhalation LC50 Rat: 450 mg/l 4.00 Hours
	Acute Oral LD50 Guinea pig: 1200 mg/kg
	Acute Oral LD50 Mouse: 1200 mg/kg
	Acute Oral LD50 Rabbit: 320 mg/kg
	Acute Oral LD50 Rat: 1480 mg/kg
	Acute Other LD50 Mouse: 1130 mg/kg
	Acute Other LD50 Rabbit: 280 mg/kg
	Acute Other LD50 Rat: 340 mg/kg

Components	Test Results
Acetic Acid, Butyl Ester (123-86-4)	Acute Inhalation LC50 Wistar rat: 160 mg/l 4.00 Hours
	Acute Oral LD50 Rat: 14000 mg/kg
Xylene (Mixed Isomers) (1330-20-7)	Acute Dermal LD50 Rabbit: >= 43 g/kg
	Acute Inhalation LC50 Mouse: 3907 mg/l 6.00 Hours
	Acute Inhalation LC50 Rat: 6350 mg/l 4.00 Hours
	Acute Inhalation LCL0 Rat: 8000 mg/l 4.00 Hours
	Acute Oral LD50 Mouse: 1590 mg/kg
	Acute Oral LD50 Rat: 3523 - 8600 mg/kg
Methanol (67-56-1)	Acute Dermal LD50 Rabbit: 15800 mg/kg
	Acute Inhalation LC50 Cat: 43.68 mg/l 6.00 Hours
	Acute Inhalation LC50 Rat: 87.5 mg/l 6.00 Hours
	Acute Oral LD50 Dog: 8000 mg/kg
	Acute Oral LD50 Monkey: 2 g/kg
	Acute Oral LD50 Mouse: 7300 mg/kg
	Acute Oral LD50 Rabbit: 14.4 g/kg
	Acute Oral LD50 Rat: 5628 mg/kg
	Acute Other LD50 Guinea pig: 3556 mg/kg
	Acute Other LD50 Hamster: 8555 mg/kg
	Acute Other LD50 Monkey: 3 g/kg
	Acute Other LD50 Mouse: 4100 mg/kg
	Acute Other LD50 Rabbit: 1826 mg/kg
	Acute Other LD50 Rat: 2131 mg/kg
Acetone (67-64-1)	Acute Dermal LD50 Rabbit: 20 mg/kg
	Acute Inhalation LC50 Rat: 50.1 mg/l 8.00 Hours
	Acute Oral LD50 Mouse: 3000 mg/kg
	Acute Oral LD50 Mouse: 5.2 g/kg
	Acute Oral LD50 Rabbit: 5340 mg/kg
	Acute Oral LD50 Rat: 5800 mg/kg
	Acute Other LD50 Mouse: 1297 mg/kg
	Acute Other LD50 Rat: 5500 mg/kg
Methyl Ethyl Ketone (78-93-3)	Acute Dermal LD50 Rabbit: >= 8000 mg/kg
	Acute Inhalation LC50 Mouse: 11000 mg/l 45.00 Minutes
	Acute Inhalation LC50 Rat: 11700 mg/l 4.00 Hours
	Acute Oral LD50 Mouse: 670 mg/kg
	Acute Oral LD50 Rat: 2300 - 3500 mg/kg

Sensitization Not available.

US ACGIH Threshold Limit Values: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

Local effects Components of the product may be absorbed into the body through the skin. Blood disorder may occur after ingestion. Liver toxicity. Irritating to respiratory system. Irritating to eyes. Irritating to skin.

Chronic effects

Hazardous by OSHA criteria. Prolonged inhalation may be harmful. This product may be harmful if it is absorbed through the skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.

Subchronic effects

Blood disorder may occur after prolonged inhalation. Blood disorder may occur after ingestion. Blood disorder may occur after prolonged skin contact. Kidney injury may occur.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

2-Butoxyethanol (CAS 111-76-2)	Group A3 Confirmed animal carcinogen with unknown relevance to humans.
Acetone (CAS 67-64-1)	Group A4 Not classifiable as a human carcinogen.
Toluene (CAS 108-88-3)	Group A4 Not classifiable as a human carcinogen.
Xylene (Mixed Isomers) (CAS 1330-20-7)	Group A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2)	Group 3 Not classifiable as to carcinogenicity to humans.
Toluene (CAS 108-88-3)	Group 3 Not classifiable as to carcinogenicity to humans.
Xylene (Mixed Isomers) (CAS 1330-20-7)	Group 3 Not classifiable as to carcinogenicity to humans.

Skin corrosion/irritation

Not available.

Epidemiology

Hazardous by OSHA criteria.

Mutagenicity

Not available.

Neurological effects

Hazardous by OSHA criteria.

Reproductive effects

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.

Teratogenicity

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.

Further information

Symptoms may be delayed.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components	Test Results
2-Methyl-4-Pentanone (108-10-1)	LC50 Fathead minnow (Pimephales promelas): 492 - 593 mg/l 96.00 Hours
Toluene (108-88-3)	EC50 Water flea (Daphnia magna): 5.46 - 9.83 mg/l 48.00 Hours
	LC50 Coho salmon,silver salmon (Oncorhynchus kisutch): 5.5 mg/l 96.00 Hours
2-Butoxyethanol (111-76-2)	LC50 Inland silverside (Menidia beryllina): 1250 mg/l 96.00 Hours
Acetic Acid, Butyl Ester (123-86-4)	LC50 Fathead minnow (Pimephales promelas): 17 - 19 mg/l 96.00 Hours
Xylene (Mixed Isomers) (1330-20-7)	EC50 Water flea (Daphnia magna): 0.78 - 2.51 mg/l 48.00 Hours
	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 2.661 - 4.093 mg/l 96.00 Hours
Methanol (67-56-1)	EC50 Water flea (Daphnia magna): >= 10000 mg/l 48.00 Hours
	LC50 Fathead minnow (Pimephales promelas): >= 100 mg/l 96.00 Hours
Acetone (67-64-1)	EC50 Water flea (Daphnia magna): 21.6 - 23.9 mg/l 48.00 Hours
	LC50 Fathead minnow (Pimephales promelas): >= 100 mg/l 96.00 Hours

Components	Test Results
Methyl Ethyl Ketone (78-93-3)	EC50 Water flea (Daphnia magna): 4025 - 6440 mg/l 48.00 Hours LC50 Sheepshead minnow (Cyprinodon variegatus): >= 400 mg/l 96.00 Hours

Ecotoxicity Components of this product are hazardous to aquatic life.

Environmental effects Harmful to aquatic life.

Persistence and degradability Not available.

13. DISPOSAL CONSIDERATIONS

Waste codes

US RCRA Hazardous Waste U List: Reference

2-Methyl-4-Pentanone (CAS 108-10-1)	U161
Acetone (CAS 67-64-1)	U002
Methanol (CAS 67-56-1)	U154
Methyl Ethyl Ketone (CAS 78-93-3)	U159
Toluene (CAS 108-88-3)	U220
Xylene (Mixed Isomers) (CAS 1330-20-7)	U239

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORTATION INFORMATION

DOT

Basic shipping requirements:

Proper shipping name	Paint Related Material
Hazard class	3
UN number	UN1263
Packing group	II
Additional information:	
ERG number	128
ERG code	128

15. REGULATORY INFORMATION

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

2-Butoxyethanol (CAS 111-76-2)	1.0 % N230
2-Methyl-4-Pentanone (CAS 108-10-1)	1.0 %
Methanol (CAS 67-56-1)	1.0 %
Toluene (CAS 108-88-3)	1.0 %
Xylene (Mixed Isomers) (CAS 1330-20-7)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

2-Butoxyethanol (CAS 111-76-2)	Listed. N230
2-Methyl-4-Pentanone (CAS 108-10-1)	Listed.
Methanol (CAS 67-56-1)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (Mixed Isomers) (CAS 1330-20-7)	Listed.

US TSCA Section 12(b) Export Notification: Export Notification requirement/De minimis concentration

Xylene (Mixed Isomers) (CAS 1330-20-7)	1.0 % One-Time Export Notification only.

CERCLA (Superfund) reportable quantity

Toluene: 1000.0000
Acetone: 5000.0000
2-Methyl-4-Pentanone: 5000.0000
Acetic Acid, Butyl Ester: 5000.0000
Methanol: 5000.0000
Methyl Ethyl Ketone: 5000.0000
Xylene (Mixed Isomers): 100.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Toluene (CAS 108-88-3)	Listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Toluene (CAS 108-88-3)	Listed: January 1, 1991 Developmental toxin.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

2-Butoxyethanol (CAS 111-76-2)	500 LBS
2-Methyl-4-Pentanone (CAS 108-10-1)	500 LBS
Methanol (CAS 67-56-1)	500 LBS
Toluene (CAS 108-88-3)	500 LBS
Xylene (Mixed Isomers) (CAS 1330-20-7)	500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-Butoxyethanol (CAS 111-76-2)	Listed.
2-Methyl-4-Pentanone (CAS 108-10-1)	Listed.
Acetic Acid, Butyl Ester (CAS 123-86-4)	Listed.
Acetone (CAS 67-64-1)	Listed.
Methanol (CAS 67-56-1)	Listed.
Methyl Ethyl Ketone (CAS 78-93-3)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (Mixed Isomers) (CAS 1330-20-7)	Listed.

16. OTHER INFORMATION

Further information	HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 3 Instability: 0
Disclaimer	This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty is expressed or implied regarding the accuracy or completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all risk and liabilities. Buyer accepts and uses this material on these conditions.
Issue date	09-09-2009

Attachment I
Emission Units Table
(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
PB-1	PB-1E, PB-2E	Paint Booth	2016	34,000 cfm each stack	New 10/17/16	FIL-1
HE-1	HE-1E	Paint Booth Heater #1	2016	4.0 MMBtu/hr	New 10/17/16	None
HE-2	HE-2E	Paint Booth Heater #2	2016	4.0 MMBtu/hr	New 10/17/16	None
GB-1	GB-1E (Vents inside building)	Grit Blasting Booth	2016	24,500 cfm	New 10/17/16	DC-1
HW-1	HW-1E	Hotsy Water Heater	2016	0.6 MMBtu/hr	New 10/17/16	None
GC-1	Uncap-tured Fugitive	Automatic Spray Gun Cleaner/Solvent Recycler	2016	N/A	New 10/17/16	None
VC-1	Uncap-tured Fugitive	General Clean-up/Solvent Cleaning Operations	2016	N/A	New 10/17/16	None

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.
[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m^3)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
PB-1E	Vent	PB-1	Paint Booth	FIL-1	Filters	NA	NA	PM-10	8.21	3.00	0.10	0.04	Solid	EE	
PB-1E	Vent	PB-1	Paint Booth	NA	None	NA	NA	VOC	10.96	4.00	10.96	4.00	Gas/Vapor	EE	
PB-1E	Vent	PB-1	Paint Booth	NA	None	NA	NA	Total HAP	1.74	0.64	1.74	0.64	Gas/Vapor	EE	
PB-2E	Vent	PB-1	Paint Booth	FIL-1	Filters	NA	NA	PM-10	8.21	3.00	0.10	0.04	Solid	EE	
PB-2E	Vent	PB-1	Paint Booth	NA	None	NA	NA	VOC	10.96	4.00	10.96	4.00	Gas/Vapor	EE	
PB-2E	Vent	PB-1	Paint Booth	NA	None	NA	NA	Total HAP	1.74	0.64	1.74	0.64	Gas/Vapor	EE	
HE-1E	Vent	HE-1	Paint Booth Heater #1	NA	None	NA	NA	CO	0.31	1.36	0.31	1.36	Gas/Vapor	EE	
HE-1E	Vent	HE-1	Paint Booth Heater #1	NA	None	NA	NA	NOx	0.37	1.62	0.37	1.62	Gas/Vapor	EE	
HE-1E	Vent	HE-1	Paint Booth Heater #1	NA	None	NA	NA	PM-10	0.03	0.01	0.12	0.01	Solid	EE	
HE-1E	Vent	HE-1	Paint Booth Heater #1	NA	None	NA	NA	SO2	0.002	0.01	0.002	0.01	Gas/Vapor	EE	
HE-1E	Vent	HE-1	Paint Booth Heater #1	NA	None	NA	NA	VOC	0.02	0.01	0.09	0.01	Gas/Vapor	EE	
HE-1E	Vent	HE-1	Paint Booth Heater #1	NA	None	NA	NA	CO2e	446.7	1,956.4	446.7	1,956.4	Gas/Vapor	EE	
HE-2E	Vent	HE-2	Paint Booth Heater #2	NA	None	NA	NA	CO	0.31	1.36	0.31	1.36	Gas/Vapor	EE	
HE-2E	Vent	HE-2	Paint Booth Heater #2	NA	None	NA	NA	NOx	0.37	1.62	0.37	1.62	Gas/Vapor	EE	
HE-2E	Vent	HE-2	Paint Booth Heater #2	NA	None	NA	NA	PM-10	0.03	0.01	0.03	0.01	Solid	EE	
HE-2E	Vent	HE-2	Paint Booth Heater #2	NA	None	NA	NA	SO2	0.002	0.01	0.002	0.01	Gas/Vapor	EE	
HE-2E	Vent	HE-2	Paint Booth Heater #2	NA	None	NA	NA	VOC	0.02	0.01	0.02	0.01	Gas/Vapor	EE	
HE-2E	Vent	HE-2	Paint Booth Heater #2	NA	None	NA	NA	CO2e	446.7	1,956.4	446.7	1,956.4	Gas/Vapor	EE	

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m^3)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
GB-1E	Vents inside building	GB-1	Grit Booth	DC-1	Dust Collector	NA	NA	PM-10	10.63	5.53	0.001	0.001	Solid	EE	
HW-1E	Vent	HW-1	Hotsy Water Heater	NA	None	NA	NA	CO	0.05	0.20	0.05	0.20	Gas/Vapor	EE	
HW-1E	Vent	HW-1	Hotsy Water Heater	NA	None	NA	NA	NOx	0.06	0.24	0.06	0.24	Gas/Vapor	EE	
HW-1E	Vent	HW-1	Hotsy Water Heater	NA	None	NA	NA	PM-10	0.004	0.02	0.004	0.02	Solid	EE	
HW-1E	Vent	HW-1	Hotsy Water Heater	NA	None	NA	NA	SO2	0.0003	0.001	0.0003	0.001	Gas/Vapor	EE	
HW-1E	Vent	HW-1	Hotsy Water Heater	NA	None	NA	NA	VOC	0.003	0.01	0.003	0.01	Gas/Vapor	EE	
HW-1E	Vent	HW-1	Hotsy Water Heater	NA	None	NA	NA	CO2e	67.0	293.5	67.0	293.5	Gas/Vapor	EE	
Uncaptured Fugitive	Fugitive	GC-1	Spray Gun Cleaner	NA	None	NA	NA	VOC	Included below in Solvent Cleaning Operations.				Gas/Vapor	EE	
Uncaptured Fugitive	Fugitive	GC-1	Spray Gun Cleaner	NA	None	NA	NA	Total HAP	Included below in Solvent Cleaning Operations.				Gas/Vapor	EE	
Uncaptured Fugitive	Fugitive	VC-1	Solvent Cleaning & Misc. Operations	NA	None	NA	NA	VOC	Varies	2.40	Varies	2.40	Gas/Vapor	EE	
Uncaptured Fugitive	Fugitive	VC-1	Solvent Cleaning & Misc. Operations	NA	None	NA	NA	Total HAP	Varies	0.48	Varies	0.48	Gas/Vapor	EE	
														EE	

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

[4] Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[5] Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[6] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

[7] Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data								
Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
PB-1E	24" x 54"	Ambient	32,000	244	590	31.25	4,255.78	427.55
PB-2E	24" x 54"	Ambient	32,000	244	590	31.25	4,255.78	427.55
HE-1E	0.5	300	600	50	590	19.5	4,255.78	427.55
HE-2E	0.5	300	600	50	590	19.5	4,255.78	427.55
GB-1E (Vents inside building)	22" x 36"	Ambient	24,500	294	590	NA (Vents inside building)	4,255.78	427.55
HW-1E	0.5	300	600	50	590	19.5 (estimated)	4,255.78	427.55

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? ☐ Yes ☒ No ☐ If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? ☐ Yes ☒ No ☐ If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? ☐ Yes ☒ No ☐ If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? ☐ Yes ☒ No ☐ If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? ☒ Yes ☐ No ☒ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS [1]	Maximum Potential Uncontrolled Emissions [2]		Maximum Potential Controlled Emissions [3]		Est. Method Used [4]
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads	Not Applicable					
Unpaved Haul Roads	Not Applicable					
Storage Pile Emissions	Not Applicable					
Loading/Unloading Operations	Not Applicable					
Wastewater Treatment Evaporation & Operations	Not Applicable					
Equipment Leaks	Not Applicable					
General Clean-up VOC Emissions	VOC HAP	Varies	2.40 0.48	Varies	2.40 0.48	EE
Other:	Not Applicable					

[1] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. DO NOT LIST H_2, H_2O, N_2, O_2, and Noble Gases.

[2] Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[3] Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[4] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

Attachment L

Emission Unit Data Sheets

PB-1	Paint Booth
HE-1, HE-2	Paint Booth Heater #1 & #2
GB-1	Grit Blasting Booth
HW-1	Hotsy Water Heater
GC-1	Automatic Spray Gun Cleaner
VC-1	General Clean-up/Solvent Cleaning Operations

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): PB-1

1. Name or type and model of proposed affected source:

Col-Met paint spray booth, which will spray paint on the surface of used truck, trailer and crane equipment.

Air emissions are controlled by paint filter media (FIL-1) and vented via two stacks (PB-1E, PB-2E) at 34,000 CFM per each stack.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

NA

4. Name(s) and maximum amount of proposed material(s) produced per hour:

NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	4	Days/Week	5	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: [total hourly emissions for stacks PB-1E and PB-2E]

@ °F and psia

a.	NO_X		lb/hr	grains/ACF
b.	SO_2		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM_{10}	0.20	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs	21.92	lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
	Total Hazardous Air Pollutants (HAP)	3.48	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Applicant proposes to maintain monthly records of the estimated total quantity of coatings and solvents sprayed in the booth.	Applicant proposes to maintain monthly records of the estimated total quantity of coatings and solvents sprayed in the booth.
REPORTING	TESTING
None proposed.	None proposed.

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None.

APPROVAL DRAWING

☐ APPROVED ☐ DIS-APPROVED

☐ APPROVED AS NOTED ☐ REVISE AND RESUBMIT

MANUFACTURING WILL BEGIN WHEN APPROVAL HAS BEEN SIGNED AND RETURNED.

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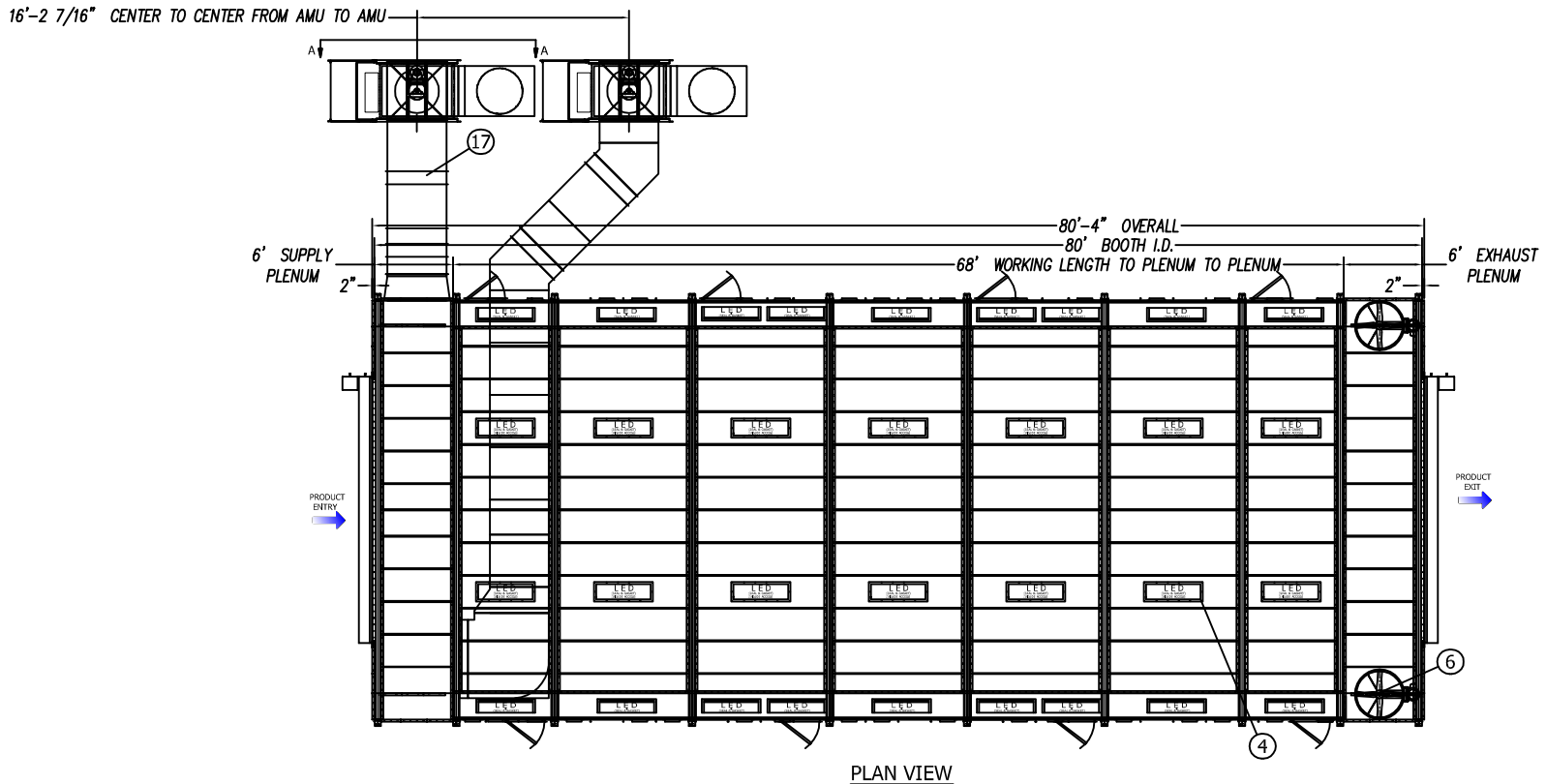
Electrical Requirements:

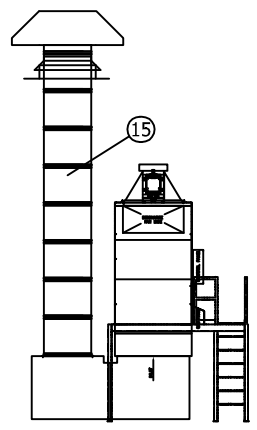
ALL INFORMATION PROVIDED BY COL-MET ENGINEERED FINISHING SOLUTIONS AS TO ELECTRICAL REQUIREMENTS IS INTENDED INFORMATIONAL PURPOSES ONLY. COL-MET DOES NOT EMPLOY A LICENSED ELECTRICIAN AND, THEREFORE, MAKES NO CLAIM, EXPRESSED OR IMPLIED, AS TO THE ACTUAL ELECTRICAL CURRENT REQUIREMENTS. IT IS THE CUSTOMERS RESPONSIBILITY TO VERIFY AND DISCUSS ALL ELECTRICAL COMPONENTS WITH A QUALIFIED INDIVIDUAL.

Suggested Total System Amperes: 120 @ 480V/ 3 Ph/ 60Hz

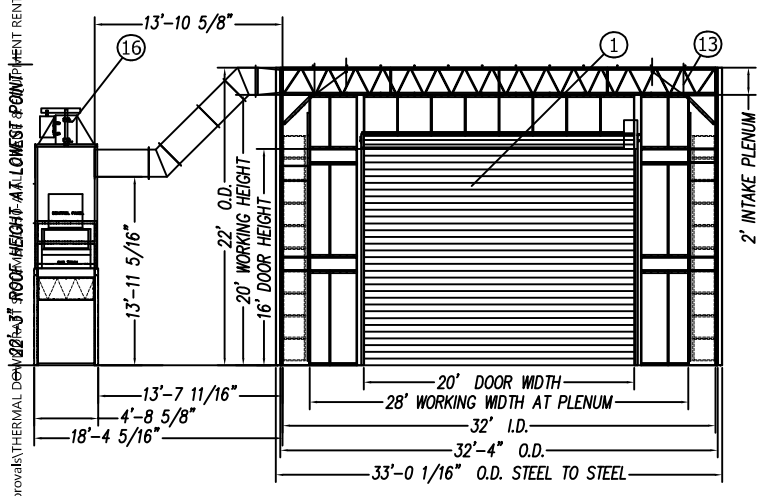
Suggested Total Lighting Amperes: 32 @ 120V/ 1 Ph/ 60Hz



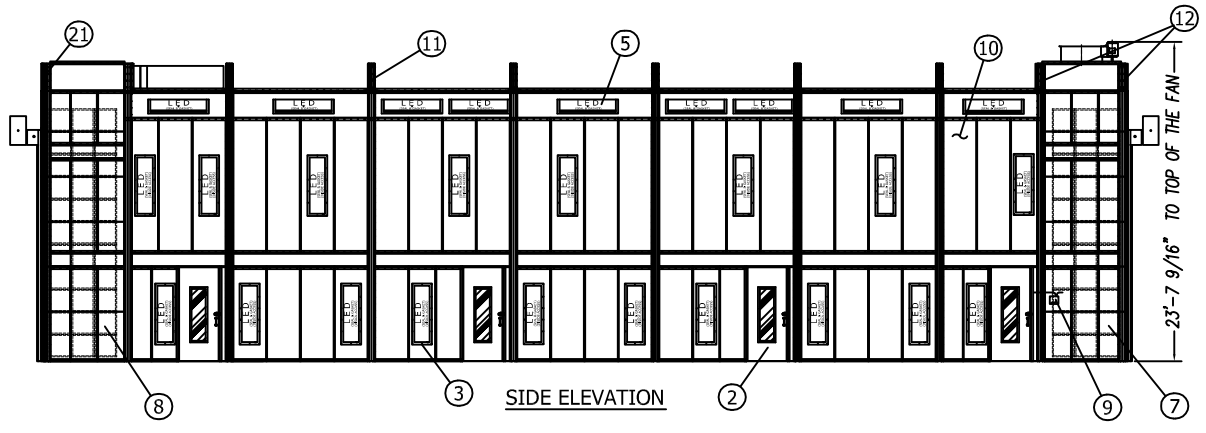
PLAN VIEW



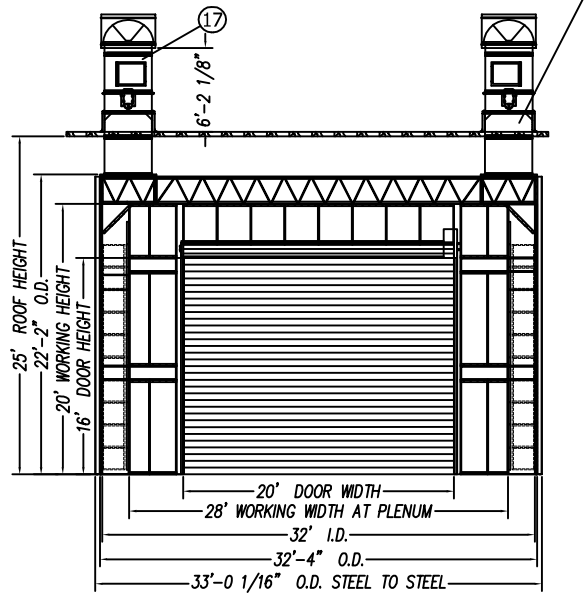
SECTION A-A VIEW



FRONT VIEW



SIDE ELEVATION



REAR VIEW

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	2 SETS		AUTOMATIC ELECTRIC ROLL-UP DOOR 20'W X 16'T W/ EXPLOSION PROOF OPERATOR AND MOTOR
2	8		PERSONNEL ACCESS DOOR; 36"x84" W/ OBSERVATION WINDOW, LATCH & HANDLE
3	36		EZ-2001 LED LIGHT FIXTURE; 4,000 LM OUTPUT ETL LISTED CLASS 1, DIVISION 2, INSIDE ACCESS (SIDE WALL PANELS)
4	14		EZ-2001 LED LIGHT FIXTURE; 8,000 LM OUTPUT ETL LISTED CLASS 1, DIVISION 2, INSIDE ACCESS (GABLE PANELS)
5	18		EZ-2001 LED LIGHT FIXTURE; 12,000 LM OUTPUT ETL LISTED CLASS 1, DIVISION 2, INSIDE ACCESS (ROOF PANELS)
6	2		42"ø TUBE AXIAL FAN; RATED FOR 32,000 SCFM EXHAUST EACH @ 1/2" SP; DRIVEN BY 10 HP ODP TYPE MOTOR (64,000 TOTAL SCFM)
7	86		EXHAUST FILTERS; 20"x20"x2" PAD W/ GRIDS
8	86		INTAKE FILTERS; 20"x20"x2" TACKY
9	2		MANOMETER (1 PER EXHAUST CHAMBER)
10	1		18 GA. GALV. STEEL SHELL (POWDER COATED WHITE)
11	6 SETS		TRUSS HORIZONTAL & W6X9# (POWDER COATED WHITE)
12	2 SETS		TRUSS HORIZONTAL & W6X9# (POWDER COATED WHITE)
13	2		DIFFUSER PANEL
14	1		1/2" AIR SOLENOID VALVE (NOT SHOWN)
15	1 LOT		SUPPLY DUCTWORK: (2) 42"Ø SQUARE TO ROUND CONNECTION (SQ-TO-RD-42-CUSTOM) (1) 42"Ø STRAIGHT DUCT 46"X64"-48" LONG (4) ELBOW INTAKE -LARGE (EHSOD-ELI-LG-90-CUSTOM) (2) LARGE INLET HOOD FOR A 42"Ø PLAIN PIPE CONNECTION (2) 42"Ø FLAT ROOF FLANGE (2) 42"Ø STORM COLLAR (16) 42"Ø PLAIN PIPE (36" SECTIONS) UNLESS OTHERWISE NOTED, ALL DUCT SUPPORT TO BE PROVIDED BY OTHERS
16	2		COLMET EH-2734K-V INDOOR AIR MAKE UP UNIT, NATURAL GAS, HEAT ONLY, DISCHARGE #1 (SEE PAGE 2 OF 2)
17	1 LOT		DISCHARGE DUCTWORK: (1) DISCHARGE CENTRIC TRANSITION 24"x54" TO 20"x60" (1) DISCHARGE OFFSET TRANSITION 24"x54" TO 20"x68"-24" LONG (4) DISCHARGE 45° ELBOW 24"x54" TO 24"x54" (2) DISCHARGE 45° OFFSET ELBOW 24"x54" TO 24"x54" (8) DISCHARGE STRAIGHT DUCT 24"x54"-48 LONG (DUCT EDGE LOOSE 1 END) (4) DISCHARGE STRAIGHT DUCT 24"x54"-36 LONG (DUCT EDGE LOOSE 1 END) (1) DISCHARGE 90° ELBOW 20"x54" TO 20"x68" (1) STRAIGHT DUCT 24"x54"-24 LONG UNLESS OTHERWISE NOTED, ALL DUCT SUPPORT TO BE PROVIDED BY OTHERS
18	1 LOT		EXHAUST DUCT PACKAGE: (2) 42"Ø PLAIN PIPE (36" SECTIONS) (2) 42"Ø PLAIN PIPE W/ CLEANOUT DOOR (36" SECTION) (2) 42"Ø AUTOMATIC ROOF VENT (6) 42"Ø CONNECTION RING (2) 42"Ø FLAT ROOF FLANGE (2) 42"Ø STORM COLLAR (2) 42"Ø ROOF MOUNT STAND (2) 42"Ø MOTOR COVER UNLESS OTHERWISE NOTED, ALL DUCT SUPPORT TO BE PROVIDED BY OTHERS
19	10		EXPLOSION PROOF LIMIT SWITCH (NOT SHOWN)
20	2		GUY WIRE KIT 6' (NOT SHOWN)
21	2 SETS		TRUSS HORIZONTAL & W6X9# (POWDER COATED WHITE)

NOTE:
CUSTOMER TO VERIFY ROOF HEIGHT DIMENSION. ADDITIONAL DUCT WORK MAY BE NEEDED DEPENDING ON ROOF HEIGHT.

ADDITIONAL DUCTWORK SUPPORT TO SUIT FIELD CONDITIONS TO BE SUPPLIED BY OTHERS.

ALL ANCHOR BOLTS TO BE SUPPLIED BY OTHERS.

COL-MET SPRAY BOOTHS ARE MANUFACTURED IN ACCORDANCE WITH NFPA-33.

BOOTH WALLS & CEILING PANELS FABRICATED OF 18 GA. GALVANIZED STEEL IN ACCORDANCE WITH NFPA-33 CHAPTER 5.1.4.

SEE ORDER ACKNOWLEDGEMENT FOR COMPLETE LIST OF PROVIDED STACK, AND OPTIONAL COMPONENTS.

IMPORTANT NOTICE:
IN THE CONSTRUCTION OF THIS BOOTH THERE MAY BE POSSIBLE FIELD MODIFICATIONS BY THE INSTALLER. THESE MODIFICATIONS MAY INCLUDE, BUT ARE NOT LIMITED TO:

- WELDING
- CUTTING
- NOTCHING
- DRILLING

GENERAL NOTES:

1. WORK CHAMBER WILL BE BOLTED CONSTRUCTION WITH 5/16" BOLTS ON STANDARD 6" CENTERS
2. WORK CHAMBER TO BE 18 GA. GALVANIZED UNPAINTED SHEET METAL EXCEPT AS NOTED.
3. ALL MOTOR CONTROLS, SWITCHES, LIGHT LAMPS OR TUBES, INCLUDING CONNECTIONS TO EQUIPMENT TO BE FURNISHED AND INSTALLED BY CUSTOMER EXCEPT AS NOTED.
4. AMPLE AIR MAKE-UP AND AIR SPACE WITHIN FRONT OF BOOTH MUST BE PROVIDED IN ORDER TO INSURE PROPER OPERATION OF BOOTH.
5. ALL LOCAL, CITY, & STATE PERMITS AND INSURANCE APPROVAL TO BE OBTAINED BY CUSTOMER.
6. CUSTOMER TO FURNISH ROOF PITCH, STACK QUANTITY AND CONFIGURATION IF REQUIRED.

For Information on Installation of the booth and components, please see our web site at www.colmetsb.com, click on "Resources" on the left side of the page, and then click on "Install Manual".

#	DESCRIPTION	DATE	BY
A	REVISED RIGHT SIDE AMU LOCATION TO THE LEFT SIDE, PARALLEL WITH THE LEFT AMU	5/11/16	OT
A	& RECALCULATED DISCHARGE DUCTWORK PER CUSTOMER REQUEST	5/11/16	OT

COL-MET Engineered Finishing Solutions
2975 Discovery Blvd.
ROCKWALL, TEXAS 75032
PHONE (972) 772-1919
FAX (972) 772-1833
WWW.COLMETSB.COM

JOB NO.	51130-A
TITLE	XDC-32-20-80-P-DT LAYOUT
DESCRIPTION	THERMAL DOWNDRAFT SYSTEMS
END USER	ALL CRANE & EQUIPMENT RENTAL CORP.
CUSTOMER P.O.	943
CAD DWG.	51130a-xdc32x20x80pdt.dwg
REV.	A
APPROVAL BY:	OT
DATE	5/5/16
DRAWN BY:	GK
DRAWN DATE:	4/21/16
SCALE:	NTS
SIZE:	11x17
REFERENCE	
SHEET:	1 OF 2

PCW

APPROVAL DRAWING

☐ APPROVED ☐ DIS-APPROVED

☐ APPROVED AS NOTED ☐ REVISE AND RESUBMIT

MANUFACTURING WILL BEGIN WHEN APPROVAL HAS BEEN SIGNED AND RETURNED.

SIGNATURE: _____

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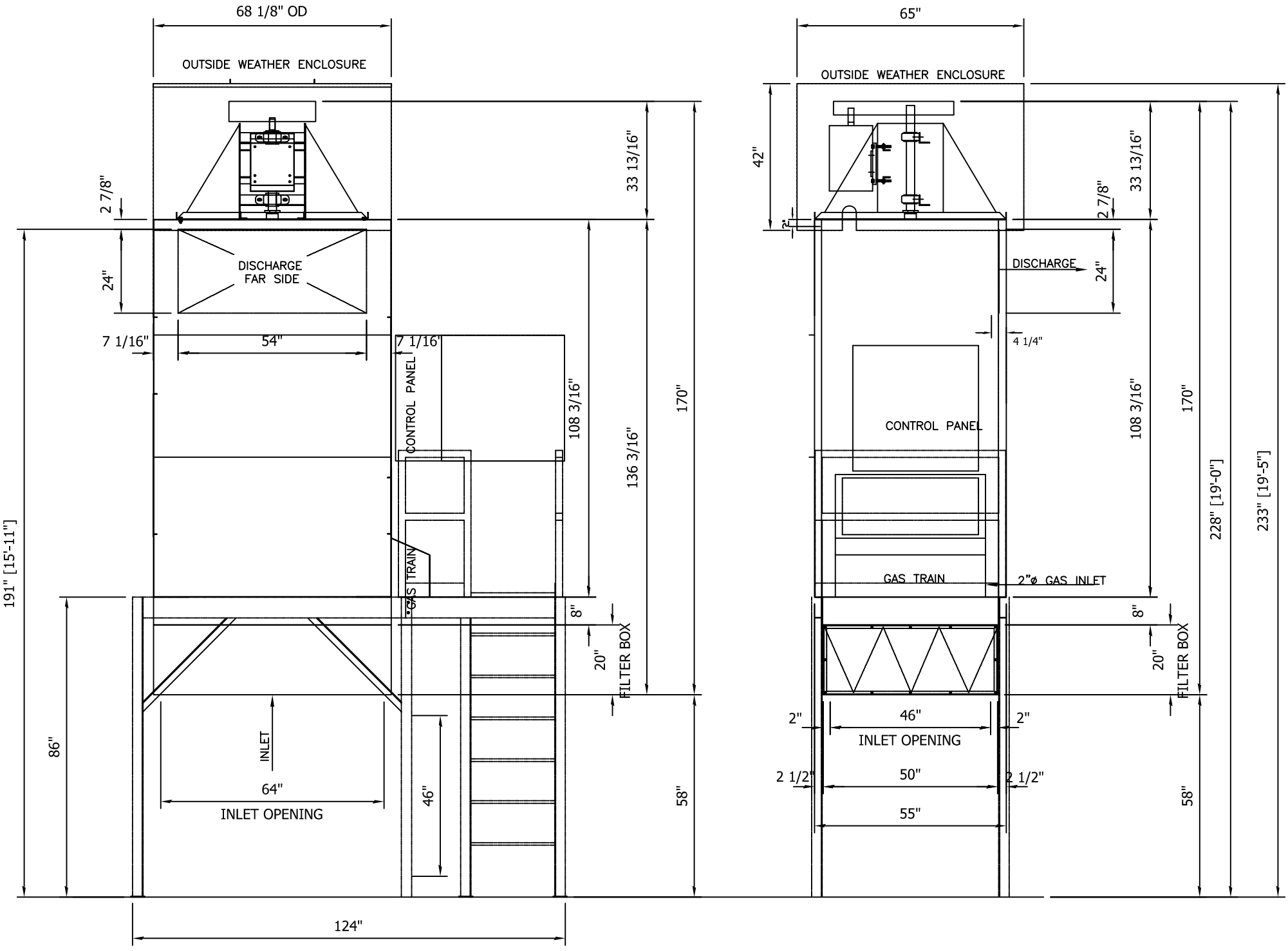


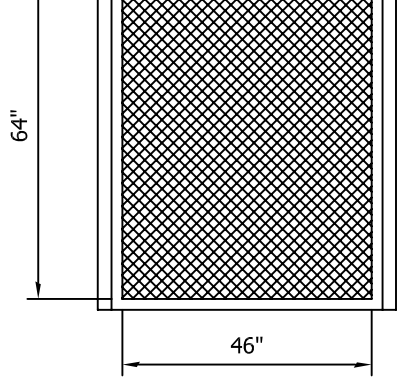
DISCHARGE #1

QTY. FOR (1) AMU

(2) AMU REQUIRED

32,000 CFM OUTPUT

ELEVATION VIEW



VERTICAL AMU

UNIT WGT. 3500 LBS

INLET VIEW

AMU SPECIFICATION

MOTOR: 27,000 TO 34,000 CFM MOTOR HP: 25

BURNER:

27,000 TO 34,000 CFM BURNER RATING: 4 mil. BTU N.G.

GAS REQUIREMENTS:

1/2 TO 5 PSI MAXIMUM (14" TO 28" W.C. @ FLOW AT THE UNIT)

27,000 TO 34,000 CFH REQUIRED: 3,000 CFH N.G.

COL-MET Engineered Finishing Solutions
2975 Discovery Blvd.
ROCKWALL, TEXAS 75032
PHONE (972) 772-1919
FAX (972) 772-1833
WWW.COLMETSB.COM

JOB #:	51130-C
APPROVAL BY:	OT
DATE:	5/5/16
DETAILED BY:	
DATE:	
ORDER DATE:	4/21/16 GK
TITLE:	EH-2734K-V LAYOUT
DISTRIBUTOR:	THERMAL DOWNDRAFT SYSTEMS
END USER:	ALL CRANE & EQUIPMENT RENTAL CORP.
CUSTOMER P.O.:	943
FILE NAME:	51130-c eh-2734k-v.dwg
REV.	
SCALE: NTS	SIZE: 11x17
REFERENCE JOB #:	SHEET: 2 OF 2

CEFS-09386-CL

February 16, 2016

All Crane & Equipment Rental Corp.
140 W. 19th. Street
Nitro, W.V. 25143
304-766-0300
Chad Shamblin

Thermal Downdraft Services, LLC is pleased to offer the following proposal for your consideration.

(1) - One - Extreme Duty Pressurized Cross-draft booth with interior working dimensions of: 32' wide X 20' tall X 80' long. Approximate overall dimensions: 36Ft'-8In wide X 23Ft'-2In tall X 80Ft'-4In long.

(2) - Two- 42" diameter, 10HP tube axial fan operation at 32,000 SCFM @ 1/2" static pressure will provide exhaust. Total air exhausted will be 64,000 SCFM. Will be located outside.

(128) - 48 Inch 4-lamp ETL Listed Class I Division II Inside-access fluorescent fixtures (lamps included) will supply illumination.

(2) - Two - sets of solid Automatic Roll-up product doors w/ a nominal opening of: 20' wide X 16' tall.

(8) - Eight- 36" X 84" Personnel Door(s) with Window(s) will provide egress.

Exhaust ductwork has been quoted based on an estimated roof height of 25 feet with an Estimated Flat Roof with no pitch. Ductwork is figured using a straight run with no offsets. Actual ductwork requirements will be dictated by field conditions including but not limited to a verified roof height, roof pitch, obstructions and local code restrictions. Intake and Discharge duct (if quoted) is shown for estimation purposes only. Actual ductwork requirements will be dictated by field conditions including but not limited to verified roof height, roof pitch, obstructions and local code restrictions. Duct support by others.

(1) – Titan Model TA – 233 NG VRV Vertical oriented, Floor mounted, inside, with the burner configured for natural gas. The air makeup unit will provide 64,000 SCFM of heated replacement air to the booth. A VFD for controlling the exhaust fans and the booth light switch will be included with the controls package for the AMU.

Thank you for the opportunity to quote your needs. We realize that in some cases slight equipment revisions may be required. Therefore as part of this proposal Col-Met has allowed for up to (2) Customer driven revisions during the approval process; additional revisions will be subject to possible engineering fees as well as any equipment changes that may impact the cost. Approval drawings (if required) will be available up to 2 weeks after receipt of down payment. Ship dates are established once final receipt of signed approval. Prices quoted are F.O.B. point of manufacture. All Col-Met terms and conditions apply.

• Phone: (888) 452-6684 • Fax: (972) 772-1833 • www.colmetsb.com •

CEFS-09386-CL

QTY	Part Number	Description	Price each	Sale Price
1	XDC-32-20-80-P-DT	Cross-draft Extreme Duty Truck Booth 32 x 20 x 70	[redacted]	[redacted]
1	TA – 233NG VRV	Titan AMU 64,000 CFM	[redacted]	[redacted]
4	EHSQD-SD-LG-48	Straight-Discharge<Large>48"	[redacted]	[redacted]
4	EHSQD-ELD-LG-45-V	Elbow-Discharge<Large>45"	[redacted]	[redacted]
2	PP-42	42" PLAIN PIPE	[redacted]	[redacted]
2	PPD-42	42" PIPE WITH CLEANOUT DOOR	[redacted]	[redacted]
2	ARV-42	42" AUTO DAMPER STACK HEAD	[redacted]	[redacted]
6	CNX-42	42" CONNECTION RING	[redacted]	[redacted]
2	FRF-42	42" FLAT ROOF FLANGE	[redacted]	[redacted]
2	FS-42-F	Floor Mounted Stand	[redacted]	[redacted]
2	MC-42	42" Motor Cover	[redacted]	[redacted]
10	EXP-LMT-SWITCH	Explosion Proof Switch	[redacted]	[redacted]
2	GWKIT-6FT	Guy Wire Kit 6'FT	[redacted]	[redacted]
2	3-Axis Man Lifts	3-Axis Man Lifts FOB Osseo, WI	[redacted]	[redacted]
1	Installation	Terminal Point Installation		[redacted]
1	Rental	Rental Equipment Customer to provide all rental equipment, man lift, fork lift and cranes.		
1	Freight	Estimated Shipping & Handling		[redacted]
		Total:		[redacted]

*When you have a straight run of duct over 21' in length, Col-Met suggests using Spiral Pipe. For pricing on Spiral Pipe upgrade, please contact a Col-Met Engineered Finishing Solutions sales representative

*NFPA-33 Chapter 13.3.1.3.2 requirement where industrial air heaters are used to elevate the temperature for curing means shall be provided to deter entry into chamber and interlocks shall be provided to shut down the chamber if entry is made.

Additional Items		
Part Number	Description	Price

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Startup	**Factory Start-up**	[redacted]
PCW	**Powder Coat White**	[redacted]

Scope:

- **Pressurized air is forced into the bridge intake plenum located at the front of the booth and moves through the intake filters, clean air flows into the booth, passes through the work area, and exits through the bridge type exhaust plenum located at the rear of the booth. Filtered exhaust air is drawn thru the exhaust plenum and discharged upward into the atmosphere through the exhaust stack(s). This booth is provided complete, with all necessary hardware to meet the applicable national requirements established by OSHA, and the NFPA for paint booth construction.**

(Optional) Startup: Factory startup with one year extended warranty including travel to and from the job site expenses, lodging and 10 hours of on-site time. Col-Met will need two weeks of notification prior to scheduling startup and pending completion of startup checklist. Additional startup time is available upon request.

Construction Features:

Panels:

- **Panels are fabricated from 18 Gauge galvanized steel precision punched on 6" centers for maximum rigidity. Panels are fastened together with 5/16" bolts/nuts and are to be sealed with the provided caulk following assembly.**

Structural Support:

- **Panels run vertically with horizontal 12" wide, 18 gauge stiffeners (punched to match corresponding panels) running the entire length of the booth placed on maximum 10' centers for added rigidity. Columns are fabricated from structural I-Beams (W-6 X 9) with welded 10 gauge attachments, pre-punched to match the wall panels. 36" tall web-joist to support the roof of booth.**

Illumination:

- **Lighting is provided by 48" long, 4-tube, 32 watt, T-8, fluorescent type fixtures. Fixtures are Inside Access rated for Class I Div. II Groups A, B, C, and D Class II Div. II Groups F & G. All fixtures are ETL listed and approved for their intended use and placement. Fixtures are supplied with dual ballasts to accept either 120V or 277V power. Ballasts carry a 5 year limited warranty.**

Filtration:

- **Intake air filters: Rated by UL as Class 2 and are EPA registered as environmentally safe. Filters are self-supporting in an internal frame sized 20" x 20" x 1". One set of filters will be supplied with this unit.**
- **Exhaust air filters are a fiberglass paint arrestor pad made specifically for the collection of paint overspray. These filters are UL rated as Class 2. A filter holding grid is provided for each filter cell. This unit is provided with one set of filters.**
- **Manometer(s) will be provided with the unit to monitor the filter resistance and thereby offer a visual indicator of the filter's life and efficiency.**

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Exhaust Air:

- **A tube axial type duct fan specifically designed and constructed for use in paint spray booths and similar applications is provided for exhaust. A precision balanced, fabricated, aluminum non-sparking fan blade moves the air through the fan. Bearings are mounted in rubber isolators for smooth operation. The motor, drive, and bearings are isolated from the exhaust air stream. The bearings are sized with a minimum average life, per AFBMA, in excess of 200,000 hours when operating at the maximum RPM of the fan size.**

Air Replacement:

- **(2) - Two-Col-Met EH-2734K-V, Vertical oriented, Floor mounted, outside, with the burner configured for natural gas. The air makeup unit will provide 27,000-34,000 SCFM of heated replacement air to the booth. A VFD for controlling the exhaust fan and the booth light switch will be included with the controls package for the AMU.**

Product Doors:

- **Rollup Doors are constructed of 18 gauge slats with weather stripping and are provided with one (1) general-purpose door switch for exterior mounting and one (1) explosion-proof door switch for placement within the spray booth. The electric motor operator shall have an extended mounting to raise the motor and controls a minimum of 36" from the door opening.**

Roll-Up Door Installation Disclaimer:

Specific installation techniques necessarily vary with job conditions, size of door, lifting methods available and installation crew preferences. Provided instructions are intended to inform professional overhead door installers about the general order of installation task. We recommend the roll-up doors provided with this booth be installed by experienced, professional installers.

Personnel access doors:

- **Personnel access doors are double wall 18 Ga. galvanized steel, and are provided pre-hung in a heavy gauge steel frame ready for mounting to the spray booth. These doors are provided with a foam rubber weather stripping seal about the perimeter. The mounting hardware includes a FM approved panic type safety latch and two 6" door pulls.**

Code Compliance:

- **All Col-Met booths are designed to meet or exceed the requirements and recommendations of the National Fire Protection Association (NFPA), Standard Number 33, as well as the Occupational Health and Safety Administration (OSHA) CFR 29.1910.107 covering the operation and construction of spray booths.**

Warranty:

- **Col-Met warrants to buyer that the equipment to be free from defects of materials or workmanship under normal use and maintenance for a period of one year.**
- **All components supplied but not produced by Col-Met shall carry the warranty of the manufacturer.**

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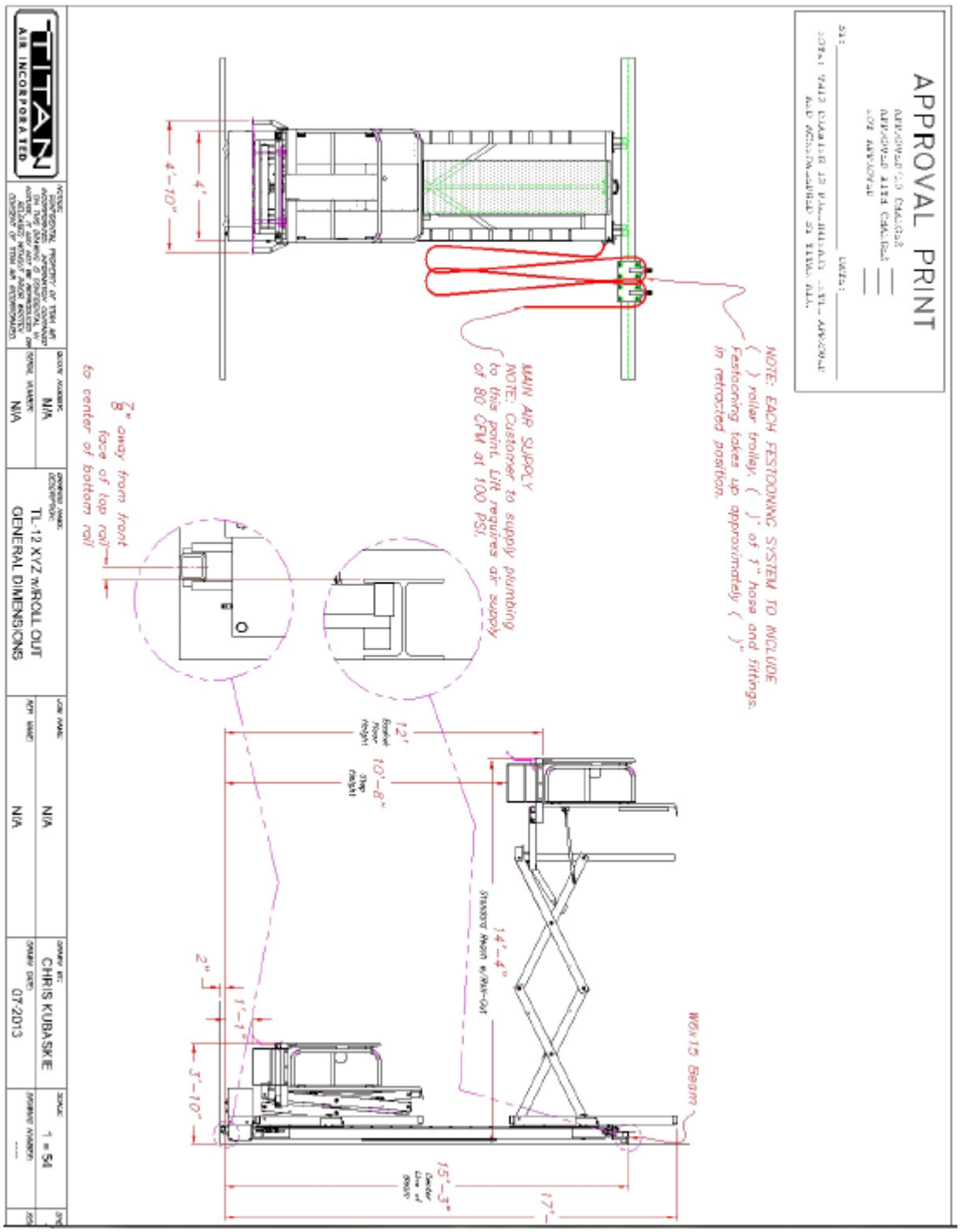

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EXCLUSIONS

• Any Federal, State, or City taxes imposed, directly or indirectly, by any present or future law on the sale or use of the proposed equipment and or material described in or required under the agreement between the parties, are the sole responsibility of the purchaser apart and separate from the agreed purchase price.
• Equipment is not designed with any seismic or wind load calculations, unless specifically noted in this proposal.
• Permits: (Approvals, certificates, licenses, bonds and taxes) Purchaser at its own expense shall procure any all construction and or use permits and licenses required in connection with the installation and use of proposed equipment and shall indemnify and hold Col-Met harmless from all civil and or criminal liability for failure to procure same and any and all violations, assessments, penalties, or damages relating thereto.
• Site modifications (floor clearing, cleaning, sealing or leveling as well as any building reinforcement or structural changes)
• Removal, relocation, rerouting and/or reconnection and testing of displaced utilities (i.e. Gas lines, electrical lines, water lines, paint lines, sprinkler system lines, compressed air lines, etc.)
• Any and all fire detection or suppression equipment required by code authorities.

UNLESS SPECIFICALLY CONTRACTED TO PROVIDE

• Electrical, Gas, Compressed Air, Water and Sewer services to attachment points on Col-Met supplied equipment.
• Supply of exhaust duct components unless specifically mentioned in the body of this proposal (Ductwork can be quoted as an option if provided with accurate required length and configuration requirements)
• Weatherproof storage and security of equipment at job site.
• Cutting, sealing, or framing of roof, for any and all required penetrations.

• Touch-up painting of equipment.
• Supply of additional gas regulator(s), which may be required to assure proper gas pressure to attachment point on Col-Met supplied equipment.
• Supply of additional motor disconnects, which might be required by local authorities or unique installation circumstances.
• Supply of additional safety related equipment not specifically mentioned in the body of this proposal.

PROPOSED ADDITION TO PROPOSAL

Proposal is valid for 45 days from the date of proposal. After 45 days all pricing will be reassessed for validity. Any changes from the terms of this proposal must be in writing; Thermal Downdraft Services, LLC does not recognize any oral changes, additions or deletions from or to this original proposal. Any oral changes must be submitted to the company in writing, and approval by an officer of the company before such changes become a part of this proposal.

Willy Dennison
Thermal Downdraft Services, LLC

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DEVILBISS

SERVICE BULLETIN

SB-2-248-J
Replaces SB-2-248-H

■ **Major Repair Kit KK-4987-2**
Minor Repair Kit KK-5034

JGA-510 (HVLP) SUCTION/PRESSURE FEED SPRAY GUN

IMPORTANT: Before using this equipment, read all safety precautions and instructions. Keep for future use.

DESCRIPTION

The high volume low pressure JGA-HVLP gun is designed to apply a wide variety of finishing materials. This gun was manufactured to provide maximum transfer efficiency by **limiting air cap pressure to 10 psi (complies with rules issued by SCAQMD and other air quality authorities)**. The gun is available in both suction feed and pressure feed versions of fluid delivery.

This gun will produce approximately 10 psi cap pressure at 50 psi gun inlet pressure, as measured at the gun inlet. An air cap test kit (see Accessories, Page 6) should be used to insure 10 psi air cap pressure is not exceeded.

Note
This gun includes 300 series stainless steel fluid passages and 400 series tip and needle. Guns may be used with chlorinated solvent materials. See Page 2 for additional warnings.

IMPORTANT: This gun may be used with most common coating and finishing materials. It is designed for use with mildly corrosive and nonabrasive materials. If used with other high corrosive or abrasive materials, it must be expected that frequent and thorough cleaning will be required and the necessity for replacement of parts will be increased.

INSTALLATION

For maximum transfer efficiency, **do not use more pressure than is necessary to atomize the material being applied**.

Connect the gun to a clean, moisture and oil free air supply using a hose size of at least **5/16" I.D.** Do not use 1/4" I.D. hose (25' x 1/4" hose at 18 CFM has a pressure loss of 25 psi. 25' x 5/16" hose at 18 CFM has a pressure loss of 8 psi.

Note
Depending on hose length, larger I.D. hose may be required. Install a HAV-501 air gauge at the gun handle and air cap test kit over tip. When gun is triggered on, adjust regulated pressure to desired setting to provide a maximum of 10 psi at the air cap. **Do not use more pressure than is necessary to atomize the material being applied**. Excess pressure will create additional overspray and reduce transfer efficiency.

Note
If quick connects are required, use only high flow quick connects approved for HVLP use such as DeVilbiss HC-4419 & HC-4699. Other types will not flow enough air for proper gun operation.

Note
If an air adjusting valve is used at the gun inlet, use DeVilbiss Model HAV-500 or HAV-501. Some competitive adjusting valves have significant pressure drop that can adversely affect spray performance. Models HAV-500 and 501 have minimal pressure drop, which is important for HVLP spraying.

OPERATION

Strain material thru 60 or 90 mesh screen. Best atomization will occur with 10 psig air cap pressure. However, some materials can be sprayed at lower pressures, improving transfer efficiency.

Open fluid adjusting screw (27) by turning counterclockwise. If gun is a suction feed version, make sure vent hole in suction cup is clean. If gun is a pressure feed version, turn on air to paint supply and adjust fluid pressure to deliver the desired paint volume.

Turn on air supply to gun and set gun inlet pressure to lowest recommended pressure for material being sprayed. Spray a test area. Air pressure and paint flow should be adjusted to provide a uniform dispersion of atomized paint throughout the pattern. Keep air pressure as low as possible to minimize bounce-back and overspray. Excessive fluid flow will result in heavy center spray patterns. Inadequate flows may cause the pattern to split. See TROUBLESHOOTING, page 5, if any problems occur. If finer atomization is required, increase gun inlet pressure. If a reduced fluid flow rate is required, turn fluid adjusting screw (27) clockwise until desired fluid flow is obtained or reduce fluid pressure (pressure feed only).

Order a free copy of Spray Gun Troubleshooting and Preventive Maintenance Guide, SB-2-001 latest revision, for details concerning setup of spray guns.

PREVENTIVE MAINTENANCE

To clean air cap and fluid tip, brush exterior with a stiff bristle brush. If necessary to clean cap holes, use a broom straw or toothpick. **Never use a wire or hard instrument**. This may scratch or burr holes causing a distorted spray pattern. See page 6 for gun cleaning accessories.

To clean fluid passages, remove excess material at source Then proceed as follows:

Suction Feed Guns - Wash out cup with solvent. Wipe off cup suction tube, then fill cup with solvent. Spray until fluid passages are clean.

Pressure Feed Guns - Flush fluid delivery system with a suitable solvent using a device such as the SolventSaver™ (see ACCESSORIES).

Wipe exterior with a solvent dampened cloth, or use 29-3100 Scrubs® (shown on page 6.) Never completely immerse in solvent as this is detrimental to the performance and gun life expectancy, as well as destroying the lubricants and packings.

Note
When replacing the fluid tip or fluid needle, replace both at the same time. Using worn parts can cause fluid leakage. See Chart 1 for ordering information. Also, replace the needle packing at this time. Lightly lubricate the threads of the fluid tip before reassembling. Torque to 20-25 ft. lbs.

CAUTION

To prevent damage to fluid tip (3) or fluid needle (32), be sure to either 1) pull the trigger and hold while tightening or loosening the fluid tip, or 2) remove fluid needle adjusting screw (27) to relieve spring pressure against needle collar.

■ **Government NSN No. 4940-01-046-9919 = KK-4987-2**

SAFETY PRECAUTIONS

This manual contains information that is important for you to know and understand. This information relates to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections.

WARNING

Important safety information - A hazard that may cause serious injury or loss of life.

CAUTION

Important information that tells how to prevent damage to equipment, or how to avoid a situation that may cause minor injury.

Note

Information that you should pay special attention to.

WARNING

The following hazards may occur during the normal use of this equipment. Please read the following chart before using this equipment.

HAZARD	CAUSES	SAFEGUARDS
Fire 	Solvent and coatings can be highly flammable or combustible especially when sprayed.	Adequate exhaust must be provided to keep air free of accumulations of flammable vapors. Smoking must never be allowed in the spray area. Fire extinguishing equipment must be present in spray area.
Solvent Spray 	During use and while cleaning and flushing, solvents can be forcefully expelled from fluid and air passages. Some solvents can cause eye injury.	Wear eye protection.
Inhaling Toxic Substances 	Certain materials may be harmful if inhaled, or if there is contact with the skin.	Follow the requirements of the Material Safety Data Sheet supplied by your coating material manufacturer. Adequate exhaust must be provided to keep the air free of toxic materials. Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist and be NIOSH approved.
Explosion Hazard - Incompatible Materials 	Halogenated hydrocarbon solvents - for example; methylene chloride and 1, 1, 1 - Trichloroethane are not chemically compatible with the aluminum that might be used in many system components. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.	Guns with stainless steel internal passageways may be used with these solvents. However, aluminum is widely used in other spray application equipment - such as material pumps, regulators, valves and cups. Check all equipment items before use and make sure they can also be used safely with these solvents. Read the label or data sheet for the material you intend to spray. If in doubt as to whether or not a coating or cleaning material is compatible, contact your material supplier.
General Safety	Improper operation or maintenance of equipment.	Operators should be given adequate training in the safe use & maintenance of the equipment (in accordance with the requirements of NFPA-33, Chapter 15). Users must comply with all local and national codes of practice and insurance company requirements governing ventilation, fire precautions, operation, maintenance and housekeeping. These are OSHA Sections 1910.94 and 1910.107 and NFPA-33.
Cumulative Trauma Disorders (CTD's) CTD's, or musculo-skeletal disorders, involve damage to the hands, wrists elbows, shoulders, neck and back. Carpal tunnel syndrome and tendinitis (such as tennis elbow or rotor cuff syndrome) are examples of CTD's.	Use of hand tools may cause cumulative trauma disorders ("CTD's"). CTD's, when using hand tools, tend to affect the upper extremities. Factors which may increase the risk of developing a CTD include: 1. High freequency of the activity. 2. Excessive force, such as gripping, pinching or pressing with the hands and fingers. 3. Extreme or awkard finger, wrist, or arm positions. 4. Excessive duration of the activity. 5. Tool vibration. 6. Repeated pressure on a body part. 7. Working in cold temperatures.	Pain, tingling, or numbness in the shoulder, forearm, wrist, hands or fingers, especially during the night, may be early symptoms of a CTD. Do not ignore them. Should you experience any such symptoms, see a physician immediately. Other early symptoms may include vague discomfort in the hand, involve loss of manual dexterity, and nonspecific pain in the arm. Ignoring early symptoms and continued repetitive use of the arm, wrist and hand can lead to serious disability.

CTD's can also be caused by such activities as sewing, golf, tennis and bowling, to name a few.

CA PROP 65

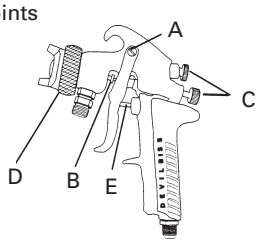
PROP 65 WARNING
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

SPRAY GUN LUBRICATION

Daily, apply a drop of •SSL-10 spray gun lube at trigger bearing stud (20) and the stem of the air valve (12) where it enters the air valve assembly (16). The shank of the fluid needle (32) where it enters the packing nut (18) should also be oiled. The fluid needle packing (17) should be lubricated periodically. Make sure the baffle (5) and retaining ring (1) threads are clean and free of foreign matter. Before assembling retaining ring to baffle, clean the threads thoroughly, then add two drops of SSL-10 spray gun lube to threads. The fluid needle spring (29) and air valve spring (11) should be coated with a very light grease, making sure that any excess grease will not clog the air passages. For best results, lubricate the points indicated, daily.

•A Material Safety Data Sheet is available from DeVilbiss upon request.

A. Trigger Points
B. Packing
C. Adjusting Valves
D. Baffle Threads
E. Air Valve Cartridge

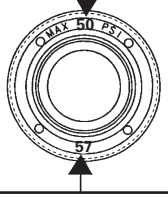


PARTS REPLACEMENT - FLUID INLET GASKET (6) REPLACEMENT INSTRUCTIONS

1. Remove fluid inlet adapter (8) with appropriate wrench.
2. Clean Loctite from gun body inlet threads and seal area.
3. Place gasket (6) squarely onto the fluid inlet adapter and push it down until it is flat against the shoulder.
4. Place a couple of drops of medium strength thread sealant (i.e. Loctite 242 blue, or equal) on threads before installing fluid inlet adapter.
5. Torque fluid inlet adapter to 20-25 ft. lbs. and tighten locknut.

Figure 1 Baffle

Maximum air pressure required to assure compliance of 10 psi Max. Cap Pressure - this reading must be taken at the spray gun handle inlet fitting.



Air cap number located on face of cap - cap number must correspond with baffle number to assure 10 psi cap pressure.

Chart 1

FLUID TIP AND NEEDLE		
Needle	Tip	Tip Size (I.D.) In. mm
JGA-402-DEX	AV-2125-D	.086 2.2
JGA-402-E	AV-2125-DE	.070 1.8
JGA-402-FX	AV-2125-DFX	.042 1.1

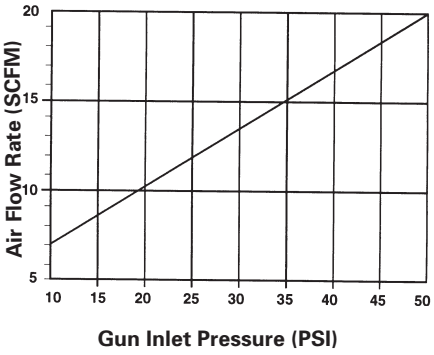
Note: Do not use AV-1 copper gasket with this spray gun.

Chart 2

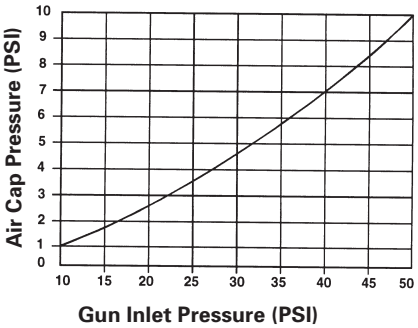
AIR CAP & BAFFLE COMBINATION			
No. Stamped on Part		Set	
Air Cap Part No.	Baffle	Ref. No. 2 Air Cap	Ref. No. 5 Baffle
57	57	JGHV-101-57	JGHV-457-57

JGHV-101-57 Air Cap Performance Charts

Graph 1



Graph 2



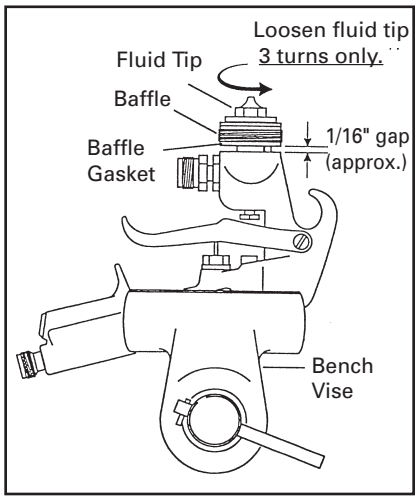
DISASSEMBLY INSTRUCTIONS - NEW BAFFLE ASSEMBLY

The baffle design incorporates a tight, press fit with the fluid tip, assuring a positive air seal. With this design, the baffle may pull away from the gun body when the tip is removed and stay locked onto the fluid tip. If this occurs, follow the instructions below.

Note
A bench vise should be used for convenience and to avoid damage to the spray gun.

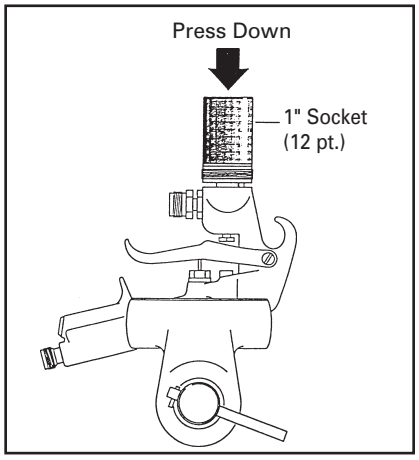
1. Secure the spray gun in a bench vise with padded jaws, or use a rag to avoid scratching the gun body.
2. Using a 1/2" socket, loosen the fluid tip three (3) turns only, which will leave about a 1/16" gap between the baffle gasket and gun body. See Figure 2. Do not loosen the fluid tip more than three (3) turns, as damage may occur.

Figure 2

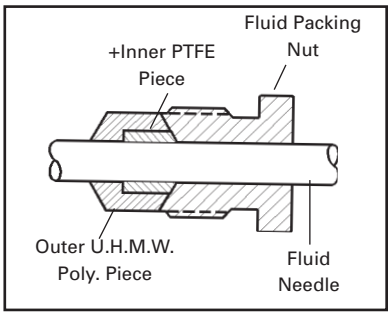


3. Place a 1" socket (12 pt.) over the fluid tip so that it rests on the top surface of the baffle. See Figure 3.
4. Press downward on the socket with sufficient force to free the baffle from the tip. See Figure 3.
5. The fluid tip and baffle can now be removed normally from the gun.

Figure 3



**(Ref. No. 17) Needle Packing Detail (2 piece packing) covered by U.S. Patent No. 5,209,501.
+Tapered edge faces out towards packing nut.



PARTS LIST

Ref. No.	Replacement Part No.	Description	Individual Parts Required
1	MBC-368	Retaining Ring	1
2	JGHV-101-57	Air Cap	1
3	See Chart 1	Fluid Tip	1
*4	JGD-14-K10	Gasket Kit, Polyethylene (Kit of 10)	1
5	JGHV-457-57	Baffle and Gasket Kit	1
6	MSV-3-K10	Gasket, PTFE (Blue)(Kit of 10)	1
7	—	Lock Nut	1
8	—	Fluid Inlet Adapter	1
9	JGA-4044	Fluid Inlet and Nut Kit	1
*10•	JGS-72-K10	Gasket Kit, PTFE (Kit of 10)	2
*11	MBD-12-K25	Spring Kit (Kit of 25)	1
*12	JGS-431-K25	Air Valve Kit (Kit of 25)	1
*13•	JGS-26-K25	U-Cup Seal Kit (Kit of 25)	1
*14	JGA-15-K25	Washer Kit (Kit of 25)	1
*15	JGA-14-K25	Snap Ring Kit (Kit of 25)	1
16	JGS-449-1	Air Valve Assembly	1
*17•	JGV-463-K3	Packing Kit (Kit of 3)	1
18	34411-122-K10	Packing Nut Kit (Kit of 10)	1
*19	—	Screw	1
20	JGS-478	Stud and Screw Kit (Includes 3 studs and 5 screws)	1
21	JGS-477-1	Trigger, Stud and Screw Kit (Kit includes 1 each)	1
22	JGA-132	Plug	1
23	P-MB-51	Nipple	1
24	JGA-497-1	Fan Adjustment Assembly	1
*25	—	Retaining Ring	1
*26•	SSG-8069-K25	O-Ring, Viton (Kit of 25)	1
27	JGS-16	Adjusting Screw	1
*28	—	Spring Pad (Included with Nos. 29 & 31)	1
*29	MBD-19-K10	Spring Kit (Kit of 10)	1
30	—	Bushing	1
31	JGA-4041	Bushing, Spring and Knob Kit	1
32	See Chart 1	Fluid Needle	1
33	—	Gun Body	
#34	See Chart 1	Fluid Tip &Needle Set (not shown)	1

*■ A quantity of necessary parts is included in Repair Kit KK-4987-2 for complete gun repair and should be kept on hand for service convenience. For more limited repair,
• "Soft Parts Kit" KK-5034 is also available (includes items 10, 13, 17, and 26).
#Ref. No. 34 includes Ref. Nos. 3 and 32. Copper tip gasket also included but not used with JGA-510 gun.
Sufixes -K10 designates kit of multiple parts. Example: JGD-14-K10 is a kit of 10 gaskets.
■ **Government NSN No. 4940-01-046-9919 = KK-4987-2**

TROUBLESHOOTING

CONDITION	CAUSE	CORRECTION
Heavy top or bottom pattern 	Horn holes plugged. Obstruction on top or bottom of fluid tip. Cap and/or tip seat dirty.	Clean. Ream with non-metallic point. Clean. Clean.
Heavy right or left side pattern 	Left or right side horn holes plugged. Dirt on left or right side of fluid tip.	Clean. Ream with non-metallic point. Clean.
	Remedies for the top-heavy, bottom-heavy, right-heavy, and left-heavy patterns: 1. Determine if the obstruction is on the air cap or the fluid tip. Do this by making a test spray pattern. Then, rotate the cap one-half turn and spray another pattern. If the defect is inverted, obstruction is on the air cap. Clean the air cap as previously instructed. 2. If the defect is not inverted, it is on the fluid tip. Check for a fine burr on the edge of the fluid tip. Remove with #600 wet or dry sand paper. 3. Check for dried paint just inside the opening; remove by washing with solvent.	
Heavy center pattern 	Fluid flow too high for atomization air. (Pressure Feed) Material flow exceeds air cap's capacity. Spreader adjustment valve set too low. Atomizing pressure too low. Material too thick.	Balance air pressure and fluid flow. Increase spray pattern width with spreader adjustment valve. Thin or lower fluid flow. Adjust. Increase pressure. Thin to proper consistency.
Split spray pattern 	Atomization air pressure too high. Fluid flow too low. Spreader adjusting valve set too high.	Reduce at transformer or gun. Increase fluid flow (increases gun handling speed). Adjust.
Jerky or fluttering spray 	*Loose or damaged fluid tip/seat. Material level too low. Container tipped too far. Obstruction in fluid passage. Dry or loose fluid needle packing nut. Loose or broken fluid tube or fluid inlet nipple.	Tighten or replace. Refill. Hold more upright. Backflush with solvent. Lubricate or tighten. Tighten or replace.
Unable to get round spray	Spreader adjustment screw not seating properly. Air cap retaining ring loose.	Clean or replace. Tighten.
Will not spray	No air pressure at gun. Fluid needle adjusting screw not open enough. Fluid too heavy for gravity feed. Fluid pressure too low.	Check air supply and air lines, blow out gun air passages. Open fluid needle adjusting screw. Thin material and/or change to larger tip size. Increase fluid pressure at tank.
Runs and sags	Too much material flow. Material too thin. Gun tilted on an angle or gun motion too slow.	Adjust gun or reduce fluid pressure. Mix properly or apply light coats. Hold gun at right angle to work and adapt to proper gun technique.
Starved spray pattern	Inadequate material flow. Low atomization air pressure (suction feed).	Back fluid adjusting screw out to first thread, or increase fluid pressure at tank. Increase air pressure and rebalance gun.
Excessive overspray	Too much atomization air pressure. Gun too far from work surface. Improper stroking (arcing, gun motion too fast).	Reduce pressure. Adjust to proper distance. Move at moderate pace, parallel to work surface.
Excessive fog	Too much or too fast-drying thinner. Too much atomization air pressure.	Remix properly. Reduce pressure.
Dry spray	Air pressure too high. Gun tip too far from work surface. Gun motion too fast. Gun out of adjustment.	Reduce air pressure. Adjust to proper distance. Slow down. Adjust.
Fluid leaking from packing nut	Packing nut loose. Packing worn or dry.	Tighten, do not bind needle. Replace or lubricate.
Fluid leaking or dripping from front of gun	Packing nut too tight. Dry packing. Fluid tip or needle worn or damaged. Foreign matter in tip. Fluid needle spring broken. Wrong size needle or tip.	Adjust. Lubricate. Replace tip and needle with lapped sets. Clean. Replace. Replace.

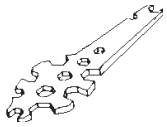
*Most common problem.

TROUBLESHOOTING (continued)

CONDITION	CAUSE	CORRECTION
Thin, sandy coarse finish drying before it flow out	Gun too far from surface. Too much air pressure. Improper thinner being used.	Check distance. Normally approx. 6-8". Reduce air pressure and check spray pattern. Follow paint manufacturer's mixing instructions.
Thick, dimpled finish "orange peel"	Gun too close to surface. Too much material coarsely atomized. Air pressure too low. Improper thinner being used. Material not properly mixed. Surface rough, oily dirty.	Check distance. Normally approx. 6-8". Increase air pressure or reduce fluid pressure. Increase air pressure or reduce fluid pressure. Follow paint manufacturer's mixing instructions. Follow paint manufacturer's mixing instructions. Properly clean and prepare.

ACCESSORIES

WR-103 Wrench



Contains all necessary tip, hose and nut sizes used on or with gun.

JGA-156-K10 Spring Clips

Joins any single piece DeVilbiss air cap with latest version MBC-368 or MSA-1 retaining ring. Helps prevent parts loss and provides easier assembly.

42884-214-K5 (3/8") & 42884-215-K10 (5/8") Cleaning Brushes

KK-5060 or 192212 Complete Cleaning Kit

These brushes are helpful in cleaning threads and recesses of gun body.

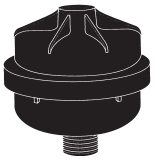
HAV-500 or HAV-501 Adjusting Valve (HAV-501 shown)

HAV-500 does not have pressure gauge. Use to control air pressure at gun.

Spray Gun Lube SSL-10-K12 (2 oz. bottle)

Compatible with all paint materials: contains no silicone or petroleum distillates to contaminate paint. MSDS available upon request.

HAF-507 Whirlwind™ In-Line Air Filter



Removes water, oil, and debris from the air line.

KB-555 (Aluminum) & KB-545-SS (S/S) 2 qt. Pressure Feed Cup With Regulator

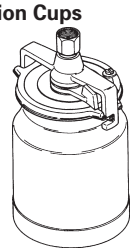
Provides greater degree of control over cup fluid pressure.

KB-4006 6-Ft. Fluid and Air Hose can be used with these cups.

TGC-545 Aluminum TGC-555 (Non-Stick Coating Lined) TSC-595 (Stainless Steel) Drip Free Suction Cups

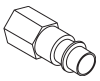
Cups have a unique, two position valve which permits selection of either a drip free or conventional open vent mode.

KR-115-K5 Lid Protector Kit keeps inside of lid clean.

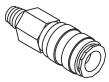


Quick Disconnect Approved for HVLP Guns (Air)

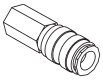
High Flow Ball and Ring Type



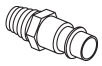
HC-4419 1/4" NPS(F)



HC-4719 1/4" NPT(M)

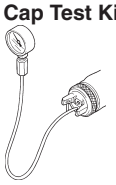


HC-4720 1/4" NPT(F)



HC-1166 1/4" NPT(M)

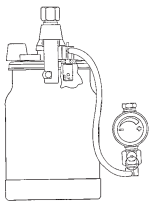
KK 5033-57 Air Cap Test Kit



The purpose of this test kit is to measure air cap atomizing air pressure at the center air port of the air cap. Used to confirm code compliance and as a daily quality control measure.

TLC-576 Aluminum Cup (Non-Stick Coating Lined) & TSC-591Stainless Steel Cup

1 Qt. pressure feed cups. 3/8" NPS (F), cam lock lid. Requires KK-4980 air regulator kit.



40-128 Millennium 3000 Twin Cartridge Paint Spray Respirator

NIOSH-Certified, for respiratory protection in atmospheres not immediately dangerous to life.

29-3100 Scrubs® Hand Cleaner Towels

Scrubs® are a pre-moistened hand cleaner towel for painters. No water is needed.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): HE-1 & HE-2

1. Name or type and model of proposed affected source:

Natural gas-fired Paint Booth Heaters #1 and #2 (rated at 4.0 MMBTU/hr each); manufacturer is Col-Met.

Purpose of the heaters is to provide heated drying air for Paint Booth (PB-1).

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

NA

4. Name(s) and maximum amount of proposed material(s) produced per hour:

NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Natural gas-fired line heaters rated at 4.0 MMBTU/hr each.

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

NA

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air: NA

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

Two heaters rated at 4.0 MMBTU/hr each.

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input: 4.0 $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: **[per each Heater HE-1 & HE-2]**

@ °F and psia

a.	NO_X	0.37	lb/hr	grains/ACF
b.	SO_2	0.002	lb/hr	grains/ACF
c.	CO	0.31	lb/hr	grains/ACF
d.	PM_{10}	0.03	lb/hr	grains/ACF
e.	Hydrocarbons	---	lb/hr	grains/ACF
f.	VOCs	0.02	lb/hr	grains/ACF
g.	Pb	---	lb/hr	grains/ACF
h.	Specify other(s)			
	CO2e	446.7	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
None proposed.	None proposed.
REPORTING	**TESTING**
None proposed.	None proposed.

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): GB-1

1. Name or type and model of proposed affected source:

Abrasive Blast Systems, LLC grit blasting booth, which will spray aluminum oxide grit to remove paint, rust and dirt from the surface of used truck, trailer and crane equipment.

Air emissions are vented inside the building, controlled by a 24,500 CFM cartridge dust collector (DC-1), Model Number ADFT 4-48.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

NA

4. Name(s) and maximum amount of proposed material(s) produced per hour:

NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	4	Days/Week	5	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X		lb/hr	grains/ACF
b.	SO_2		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM_{10}	10.63	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs		lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
			lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Applicant proposes to maintain monthly records of the estimated total grit blasting hours of operation.	Applicant proposes to maintain monthly records of the estimated total grit blasting hours of operation.
REPORTING	TESTING
None proposed.	None proposed.

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

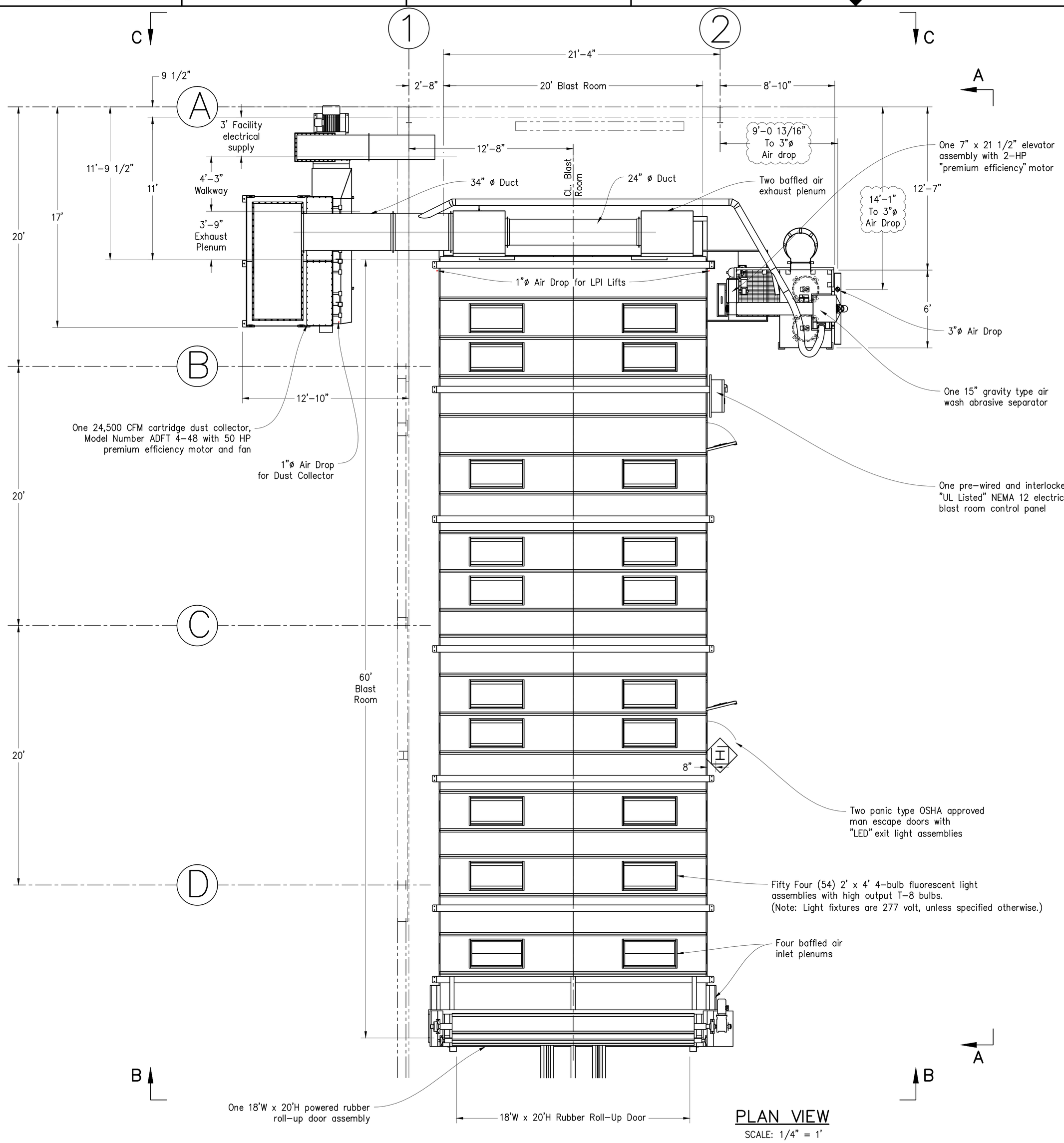
REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None.

REVISIONS		
REV	DESCRIPTION	DATE
1	Moved Dust Collector	05–02–16
2	Moved man door; show air drops for lifts and dust collector	05–17–16
2	Main drop changes to 3" ø	05–17–16



PLAN VIEW
SCALE: 1/4" = 1'

Power Requirement

The following is an estimated power requirement based on the equipment being quoted in this drawing.

Description	H.P.	Amps Fully Loaded (@ 480/60/3)
1) Longitudinal Screw #1	3	4.8
2) Longitudinal Screw #2	3	4.8
3) Cross Screw	3	4.8
4) Elevator	2	3.3
5) Dust Collector	50	65.0
6) Blast Pots, Misc. Limits, Etc. (Qty: 2)	N/A	5.0
7) Light Fixtures (Qty. 54 @ .5 amps each) (Note: Lights are 277 volts)	N/A	27.0
8) Roll-Up Door #1	3	4.8
SUB TOTAL (50% Variation) x		119.5 1.50
TOTAL REQUIRED AMPS		179.3*

*200 Amp Service

☐ APPROVED ☐ REVISE AND RESUBMIT
☐ APPROVED AS NOTED ☐ REJECTED

DATE: _____

SIGN AND RETURN: _____

ABS BLAST

ABRASIVE BLAST SYSTEMS,LLC
ABSBLAST.COM
866–666–9309

CUSTOMER NAME: All Crane & Equipment Rental
CUSTOMER ADDRESS: 140 West 19th St. Nitro, WV 25143
CONTACT: Mr. Chad Shamblin
PHONE: EXT.
CELL:
EMAIL:
PROPOSAL NO. 160003–05
REP.
SIZE D | DWG NO. 016–D–1604–GA | REV 2
SCALE: 1/4" = 1' | DATE: 04–27–16 | DRAWN BY: JW | SHEET 1 of 5

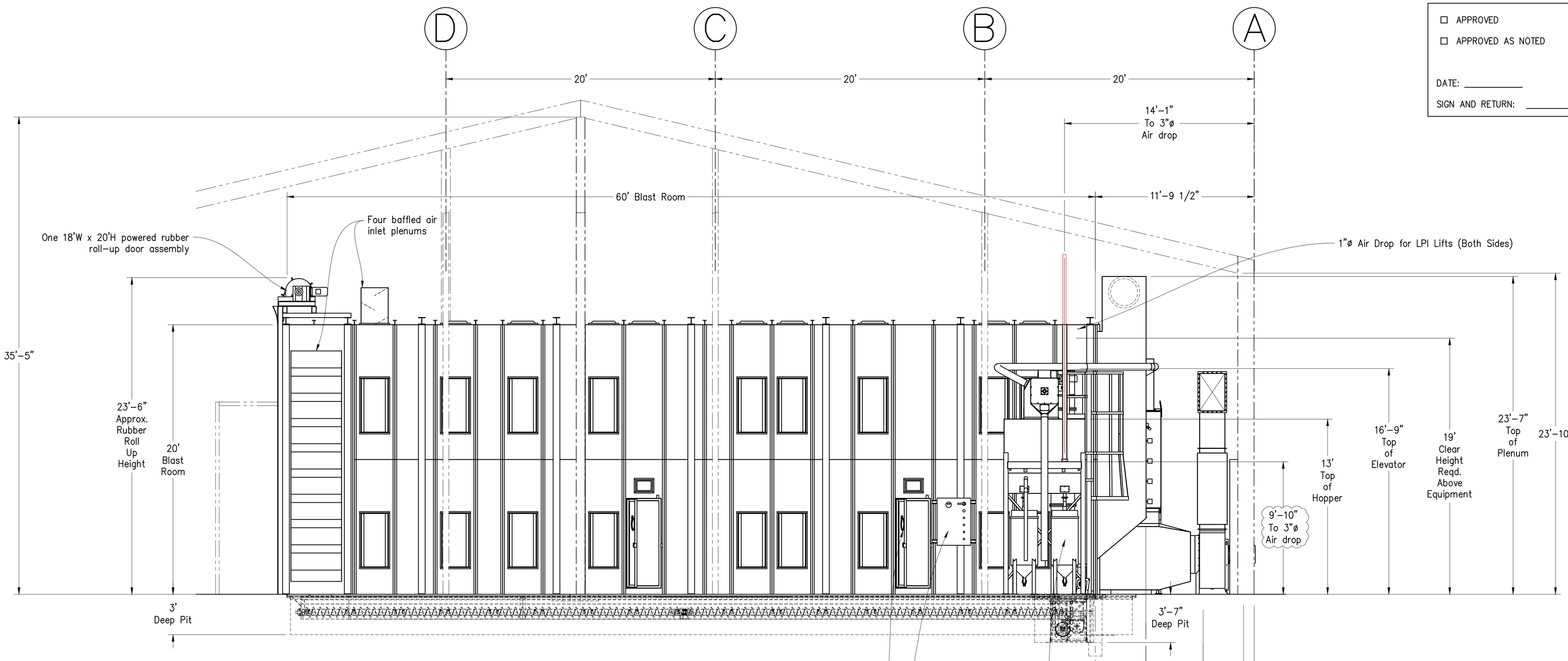
REVISIONS		
REV	DESCRIPTION	DATE
1	Moved Dust Collector	05–02–16
2	Moved man door; show air drops for lifts and dust collector	05–17–16
2	Main drop changes to 3" ø	05–17–16

☐ APPROVED ☐ REVISE AND RESUBMIT

☐ APPROVED AS NOTED ☐ REJECTED

DATE: _____

SIGN AND RETURN: _____



SECTION "A–A"

SCALE: 1/4" = 1'

ABRASIVE BLAST SYSTEMS,LLC
ABSBLAST.COM
866–666–9309

CUSTOMER NAME: All Crane & Equipment Rental

CONTACT: Mr. Chad Shamblin

CUSTOMER ADDRESS: 140 West 19th St. Nitro, WV 25143

PHONE: EXT.

CELL:

EMAIL:

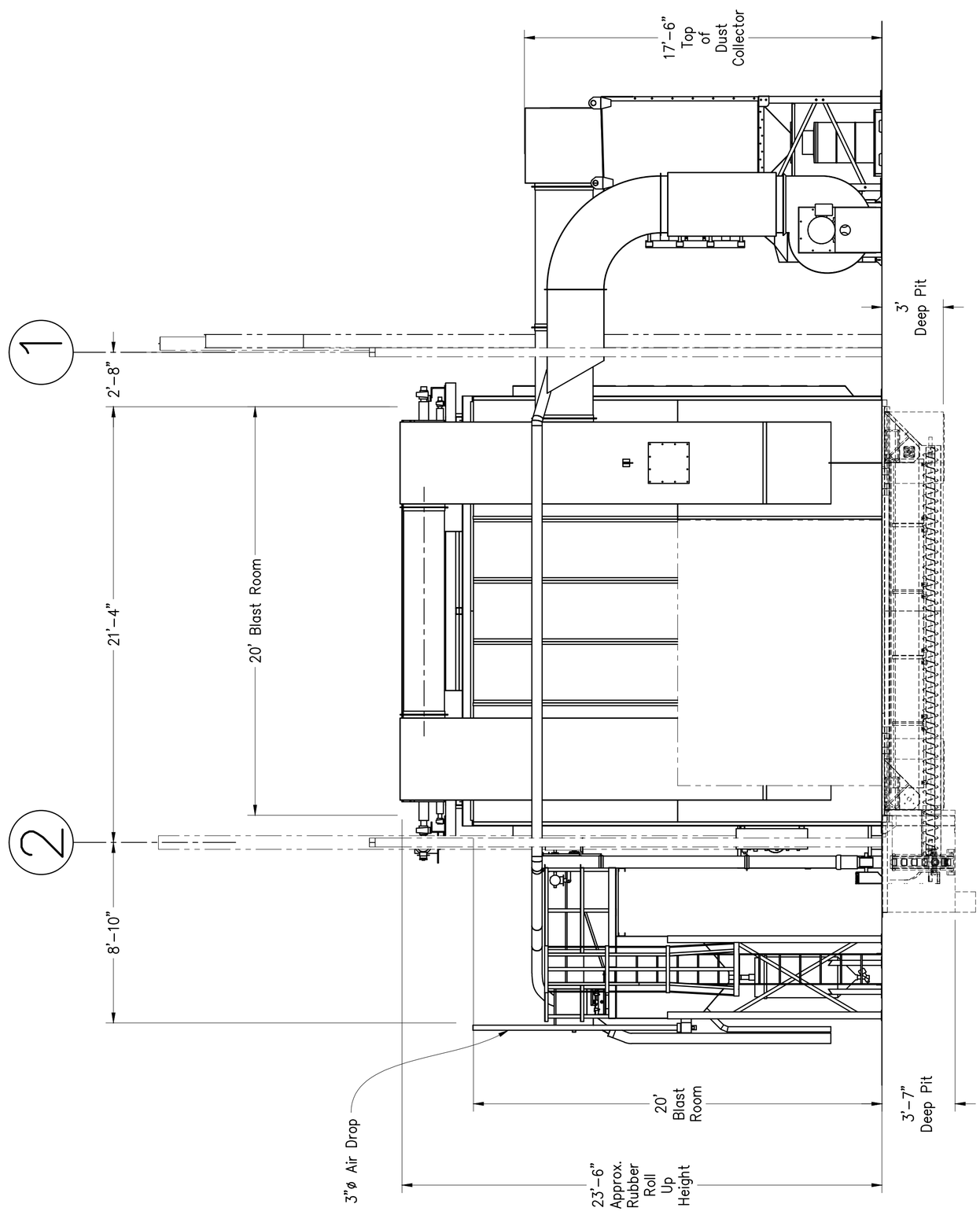
PROPOSAL NO. 160003–05

REP.

SIZE: D | DWG NO.: 016–D–1604–GA | REV: 2

SCALE: 1/4" = 1' | DATE: 04–27–16 | DRAWN BY: JW | SHEET 2 of 5

REV	DESCRIPTION	DATE
1	Moved Dust Collector	05-02-16
2	Moved man door; show air drops for lifts and dust collector	05-17-16
2	Main drop changes to 3" ø	05-17-16



SECTION "C-C"

SCALE: 1/4" = 1'

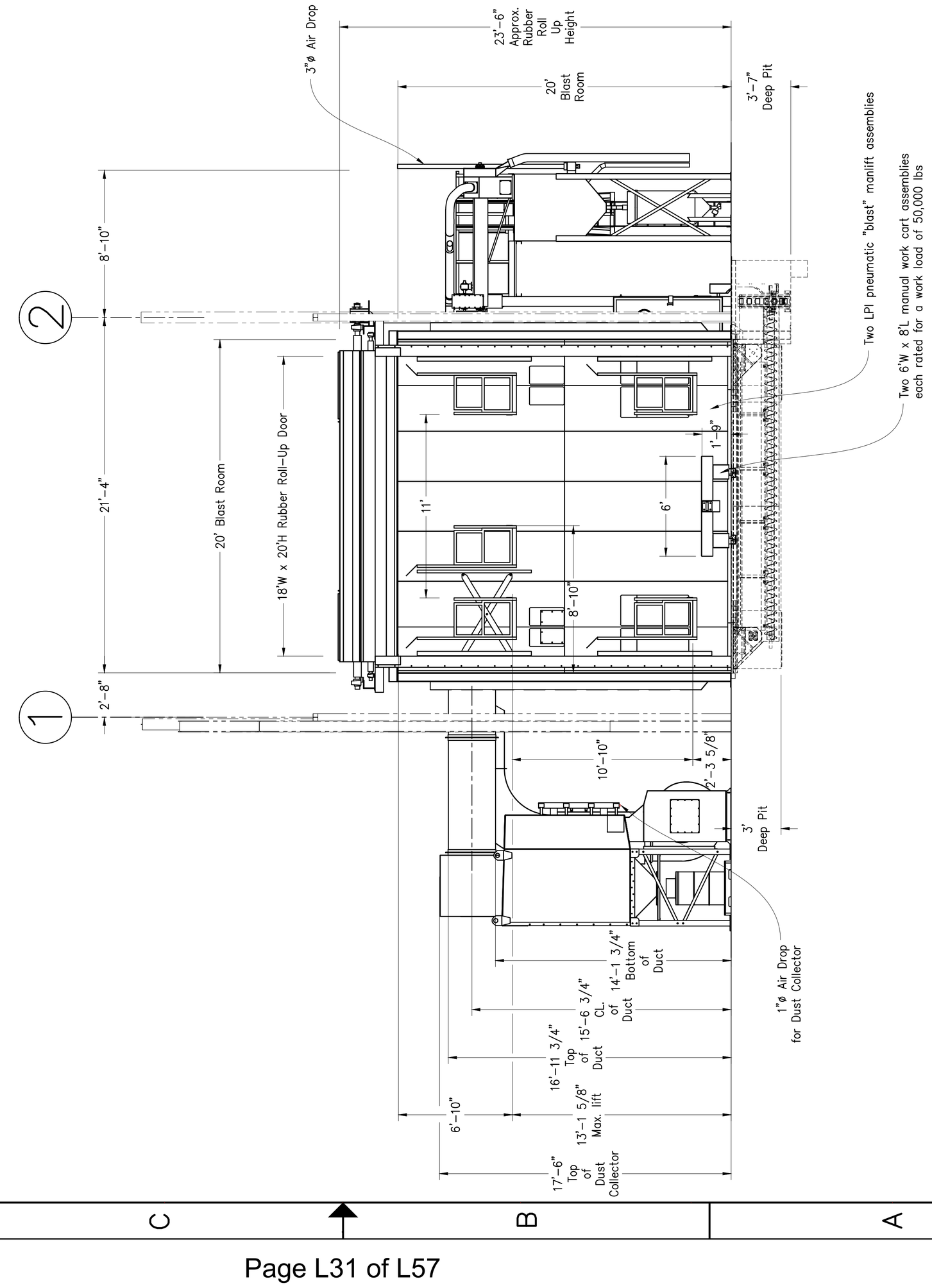
ABRASIVE BLAST SYSTEMS,LLC
ABSBLAST.COM
866-666-9309

CONTACT: Mr. Chad Shamblin
PHONE: EXT.
CELL:
EMAIL:

CUSTOMER NAME: All Crane & Equipment Rental
CUSTOMER ADDRESS: 140 West 19th St. Nitro, WV 25143

PROPOSAL NO. 160003-05
REP.
SIZE: D
DWG NO. 016-D-1604-GA
REV 2
SCALE: 1/4" = 1' DATE: 04-27-16 DRAWN BY: JW SHEET 3 of 5

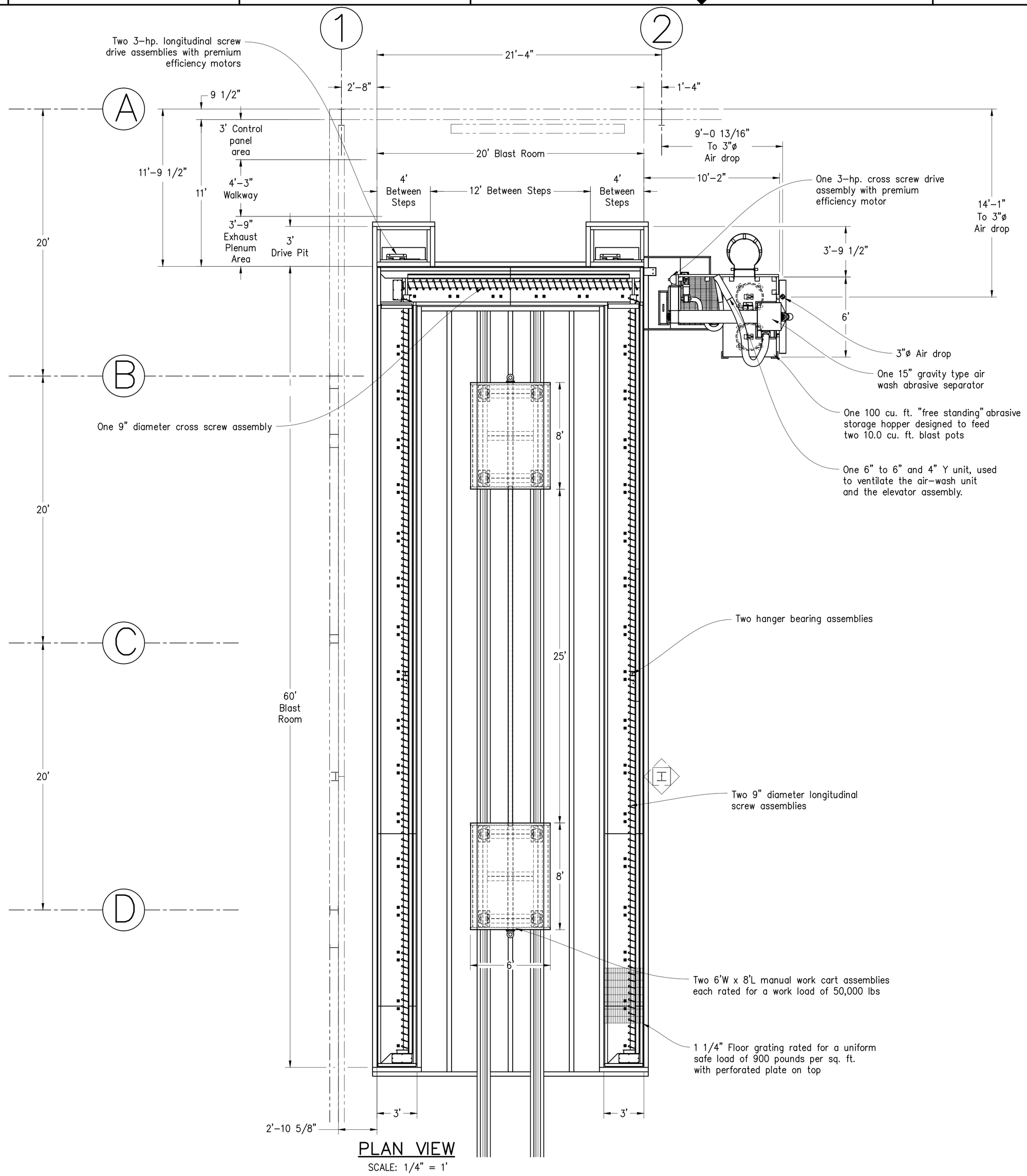
☐ APPROVED ☐ REVISE AND RESUBMIT
☐ APPROVED AS NOTED ☐ REJECTED
DATE: _____
SIGN AND RETURN: _____



SECTION "B-B"

SCALE: 1/4" = 1'

REVISIONS		
REV	DESCRIPTION	DATE
1	Moved Dust Collector	05–02–16
2	Moved man door; show air drops for lifts and dust collector	05–17–16
2	Main drop changes to 3" ø	05–17–16



PLAN VIEW

SCALE: 1/4" = 1'

☐ APPROVED ☐ REVISE AND RESUBMIT

☐ APPROVED AS NOTED ☐ REJECTED

DATE: _____

SIGN AND RETURN: _____

ABRASIVE BLAST SYSTEMS,LLC
ABSBLAST.COM
866–666–9309

CUSTOMER NAME: All Crane & Equipment Rental

CUSTOMER ADDRESS: 140 West 19th St. Nitro, WV 25143

CONTACT: Mr. Chad Shamblin

PHONE: EXT.

CELL:

EMAIL:

PROPOSAL NO. 160003–05

REP.

SIZE: D

DWG NO. 016–D–1604–GA

REV 2

SCALE: 1/4" = 1' DATE: 04–27–16 DRAWN BY: JW SHEET 4 of 5

☐ APPROVED ☐ REVISE AND RESUBMIT

☐ APPROVED AS NOTED ☐ REJECTED

DATE: _____

SIGN AND RETURN: _____

REVISIONS		
REV	DESCRIPTION	DATE
1	Moved Dust Collector	05–02–16
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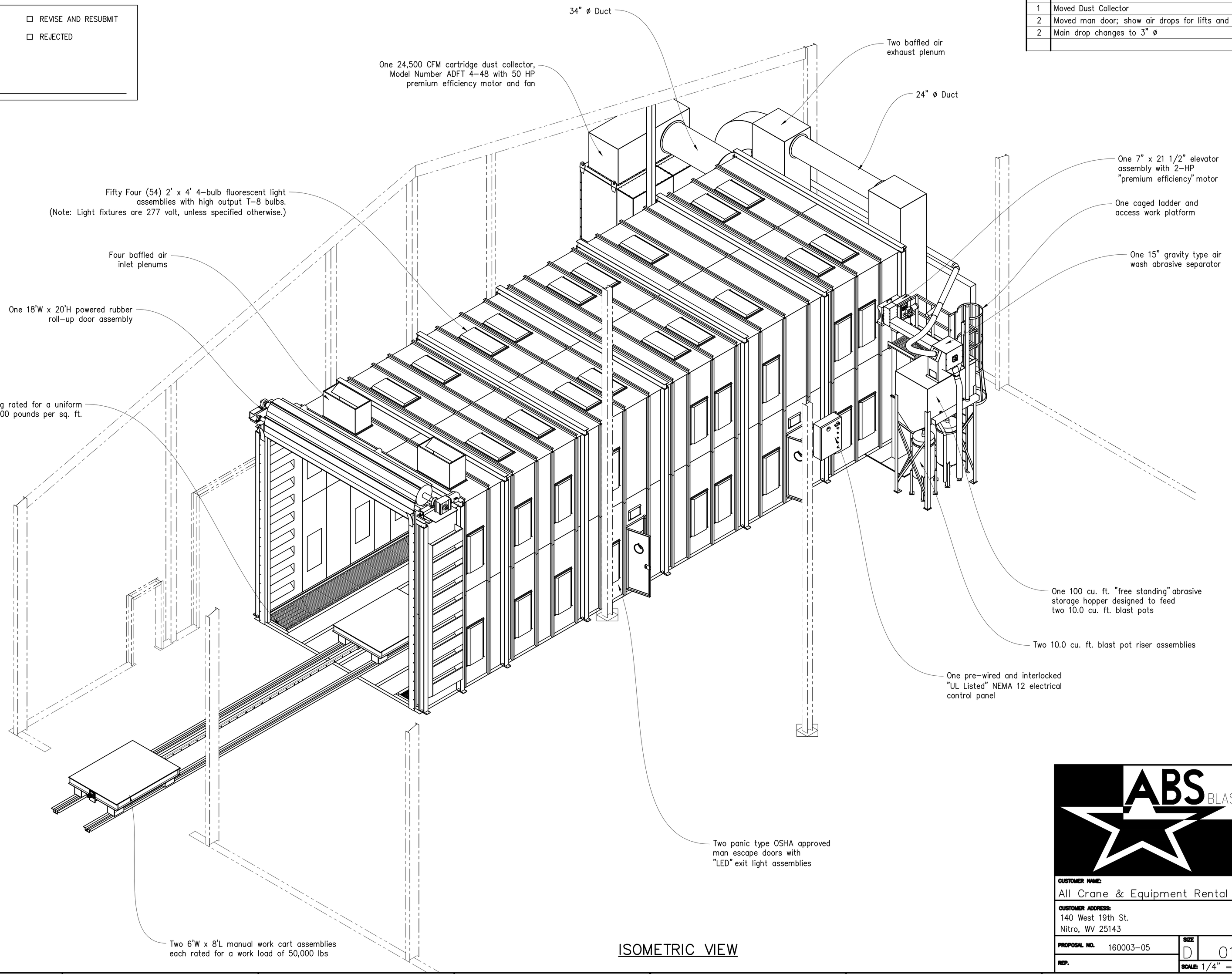


ISOMETRIC VIEW

ABS BLAST

ABRASIVE BLAST SYSTEMS,LLC
ABSBLAST.COM
866–666–9309

CUSTOMER NAME: All Crane & Equipment Rental

CUSTOMER ADDRESS: 140 West 19th St. Nitro, WV 25143

CONTACT: Mr. Chad Shamblin

PHONE: EXT.

CELL:

EMAIL:

PROPOSAL NO. 160003–05

REP.

SIZE: D

DWG NO.: 016–D–1604–GA

REV: 2

SCALE: 1/4" = 1' DATE: 04–27–16 DRAWN BY: JW SHEET 5 of 5

All Crane & Equipment Rental
140 West 19th St.
Nitro, WV 25143

Attention: Mr. Chad Shamblin

Reference: Proposal #160003-02 (Option Work Carts)

Gentlemen:

At the request of our Mr. Lance Gayle and Mr. Dan Ruark with IDS, Abrasive Blast Systems LLC is pleased to submit a quotation for indoor installed blast room equipment and related goods and services to best meet your needs.

Scope of Project: To supply a "U" shaped partial floor reclaim system for a supplied blast room facility with inside dimensions of 20'W x 20'H x 60'L. The blast room is designed for an "in-out" work flow through one (1) set of powered rubber roll-up work doors 18'W x 20'H. The equipment includes screws, motors, drives, belt and bucket elevator, air-wash separator with perforated plate rotary scalping drum, work doors, door limit switches with interlocks to shut off the blasting operation if the doors are opened, metering shed plates, control panel, qty-2 blast pot riser assemblies, 10 gauge wall and roof panels, lights, man door with vision window, baffled air inlet and exhaust plenums, two (2) wall inlet silencer assemblies, 100 cu. ft. "free standing" abrasive storage hopper with caged ladder and access platform, floor grating, and a dust collection system with a designed room air-flow of 60 FPM including heavy gauge ventilation ductwork, exhaust silencer and return air duct directly back into the building.

The following equipment is proposed:

- Two (2) 9" diameter longitudinal screw assemblies including 10-gauge mild steel hoppers. The 3/8" flighting is on a 2/3 pitch.
- One (1) 9" diameter cross screw assembly including 10-gauge mild steel hopper. The 3/8" flighting is on a 2/3 pitch.
- Two (2) 3-hp. longitudinal screw drive assemblies including reducers and C-face flange mounted TEFC motors and required NEMA 12/3R/3S motor disconnect. **(Note: Motors are "premium efficiency".)**

- One (1) 3-hp. cross screw drive assembly including reducer and C-face flange mounted TEFC motor and required NEMA 12/3R/3S motor disconnect. **(Note: Motors are "premium efficiency".)**
- All longitudinal and cross screw assemblies utilize offset/adjustable abrasive metering plate design.
- Two (2) required hanger bearing assemblies utilizing easy top access design.
- All required removable hopper ends to facilitate maintenance access.
- All required adjustable reducer mounting brackets.
- All required 1 1/4" floor grating rated **for a uniform safe load of** 900 pounds per sq. ft. with perforated plate on top.
- All required #80 and #60 chain, sprockets, guards, seals, bearings, spacers, and related hardware.
- One (1) 7" x 21 1/2" elevator assembly approximately 18' tall, including cast ductile iron buckets, 1/2" thick x 5" wide neoprene 1650# belting, top take-up, 2-HP **"premium efficiency"** motor and drive, and easy access doors.
- One (1) 15" gravity type air wash abrasive separator with integral perforated plate rotary drum assembly. This high efficiency aspirator separator has five (5) separate adjustments to allow maximum separation of the contaminants from the abrasive mix. This separator will classify ferrous and non-ferrous dry abrasives.
- All required 6" and 3" diameter metal flex trash hose.
- All required 6" and 4" diameter rubber flex ducting hose.
- One (1) 6" to 6" and 4" "Y" unit, used to ventilate the air-wash unit and the elevator assembly.
- One (1) 100 cu. ft. "free standing" abrasive storage hopper with required support steel and abrasive shut-off gates to stop the flow of abrasive if required. (Note: Hopper designed to feed two (2) 10.0 cu. ft. blast pots.)
- One (1) caged ladder and access work platform with hand railing for abrasive storage hopper to allow easy access to the air-wash separator and elevator head section. (Note: Ladder and guards are painted "safety yellow".)

- All required 10-gauge room wall panels.
- All required 10-gauge room roof panels.
- Two (2) baffled air exhaust plenums.
- Four (4) baffled air inlet plenums.
- One (1) 18'W x 20'H powered rubber roll-up door assembly, including structural steel frame, ¼" thick, 3-ply rubber panels formed steel "wind" bars, mounting hardware and controls.
- Two (2) panic type OSHA approved man escape doors with vision windows and shields.
- All required 18-gauge panel clamping assemblies to seal all wall and roof panels.
- One (1) panel seal crimping tool.
- Fifty four (54) 2' x 4' T-8/electronic ballast 4-bulb fluorescent light assemblies including hinged sidewall fixtures, ¼"-thick polycarbonate lens, gasketing, high output T-8 bulbs, cutouts and fasteners. (Note: Light fixtures are 277 volt, unless specified otherwise.)
- Two (2) OSHA approved "LED" exit light assemblies with battery back-up emergency lights that come on if power is lost.
- One (1) 24,500 CFM cartridge dust collector, Model Number ADFT 4-48. The unit includes abrasive inlet plenum, fan and **"premium efficiency"** motor (50 HP). (Note: The room air-flow is 60 FPM end-to-end ventilation.) The efficiency of the filters is 99.999% down to a particle size of .5 micron; **MERV-15 rating.**
- All required ductwork to tie system components together, as long as the dust collector is positioned within fifteen feet of the blast room.
- One exhaust fan silencer assembly, including transitional ductwork and structural support frame.
- All required "return air" ductwork to bring from the exhaust fan directly back into the building.

- One (1) pre-wired and interlocked **"UL Listed"** NEMA 12 electrical control panel, including starters, push buttons, main line disconnect, etc. for the above proposed goods including room lights. The panel includes a 12-volt transformer for the blast pot and indicator lights to show when all the doors are closed and the blast pot has power. **(Note: See attached sheet for estimated power requirements.) Electrics are: 480/60/3 (5-wire). (Note: A neutral and a ground wire are required.)**

- Two (2) 10.0 cu. ft. blast pot riser assemblies with abrasive cut-off switches, two (2) hose penetration boxes and two (2) vent boxes.

- Our standard ABRASIVE BLAST SYSTEMS, LLC "Desert Tan" paint will be used on all goods quoted.

- Two (2) sets of parts books, including maintenance and operational instructions.

TOTAL PRICE (plus sales tax, if applicable) . . . . . $ _____
F.O.B. POINT OF MANUFACTURER – GARLAND, TX

Note: A tax exemption certificate is required if no tax is collected.

Option A – Catwalk Assemblies (adder):

- Two (2) 3'W x 55'L catwalk assemblies including grating, hand railing and required caged man ladders on each end.

For an additional $ _____

Option B – LPI Pneumatic Manlifts (Adder):

- Two (2) LPI pneumatic "blast" manlift assemblies - Model BL-139; including upper and lower rail, air line, floor support plates, blast room structural support steel, air line festooning and related controls.

For an additional $ _____

Option C – Work Cart Assemblies:

- Two (2) 6'W x 8'L manual work cart assemblies, each rated for a work load of 50,000 lbs. The carts can be used separately or joined together by a telescoping tow bar that can be used to space the carts 25' apart.

For an additional $ _____

IDS BLAST

2717 Tobey Drive
Indianapolis, IN 46219
Tel - 800-800-0665
Fax - 317-545-0670
idsblast.com

Nozzle Air, Power & Abrasive Requirements

NOZZLE # ORIFICE SIZE	NOZZLE AIR, POWER & ABRASIVE REQUIREMENTS		NOZZLE PRESSURE							
			50 PSI (3.45 BAR)	60 PSI (4.14 BAR)	70 PSI (4.83 BAR)	80 PSI (5.52 BAR)	90 PSI (6.21 BAR)	100 PSI (6.89 BAR)	125 PSI (8.62 BAR)	140 PSI (9.65 BAR)
#2 1/8 inch (3.2 mm)	AIR	(cu ft/min)	12	13	15	18	19	21	26	
		(cu m/min)	0.34	.037	0.42	0.51	0.54	0.59	0.74	
	HORSEPOWER	(hp)	1.75	2	2.5	3	3.5	4	6	
		(kW)	1.30	1.49	1.86	2.24	2.61	2.98	4.47	
	ABRASIVE	(lb/hr)	70	80	90	100	110	120	135	
		(kg/hr)	32	36	41	45	50	54	61	
#3 3/16 inch (4.8 mm)	AIR	(cu ft/min)	25	30	35	40	43	45	60	
		(cu m/min)	0.71	0.85	0.99	1.13	1.22	1.27	1.70	
	HORSEPOWER	(hp)	5	8	9	9.5	10	10.5	16	
		(kW)	3.75	5.97	6.71	7.08	7.46	7.86	11.93	
	ABRASIVE	(lb/hr)	150	170	200	215	240	260	320	
		(kg/hr)	68	77	91	98	109	118	145	
#4 1/4 inch (6.35 mm)	AIR	(cu ft/min)	50	55	60	70	75	80	95	
		(cu m/min)	1.42	1.56	1.70	1.98	2.12	2.27	2.69	
	HORSEPOWER	(hp)	10	12	13	16	17	18	25	
		(kW)	7.46	8.95	9.69	11.93	12.68	13.42	18.64	
	ABRASIVE	(lb/hr)	270	300	350	400	450	500	675	
		(kg/hr)	122	136	159	181	204	227	306	
#5 5/16 inch (8 mm)	AIR	(cu ft/min)	80	90	100	115	125	140	190	230
		(cu m/min)	2.27	2.55	2.83	3.26	3.54	3.96	5.38	6.51
	HORSEPOWER	(hp)	17	20	25	27	28	30	36	60
		(kW)	12.68	14.91	18.64	20.13	20.88	22.37	26.85	44.85
	ABRASIVE	(lb/hr)	470	530	600	675	750	825	1000	1125
		(kg/hr)	213	240	272	306	340	374	454	510
#6 3/8 inch (9.5 mm)	AIR	(cu ft/min)	110	125	145	160	175	200	275	315
		(cu m/min)	3.12	3.54	4.11	4.53	4.96	5.66	7.79	8.91
	HORSEPOWER	(hp)	25	29	32	35	40	45	57	65
		(kW)	18.64	21.63	23.86	26.10	29.83	33.56	42.50	48.59
	ABRASIVE	(lb/hr)	675	775	875	975	1060	1100	1350	1840
		(kg/hr)	306	352	397	442	481	499	612	835
#7 7/16 inch (9.5 mm)	AIR	(cu ft/min)	150	170	200	215	240	255	315	405
		(cu m/min)	4.25	4.81	5.66	6.09	6.80	7.22	8.92	11.46
	HORSEPOWER	(hp)	35	40	45	50	55	60	70	90
		(kW)	26.10	29.83	33.56	37.28	41.01	44.74	52.20	67.28
	ABRASIVE	(lb/hr)	900	1000	1200	1300	1400	1510	1800	2540
		(kg/hr)	408	454	544	590	635	703	816	1152
#8 1/2 inch (12.7 mm)	AIR	(cu ft/min)	200	225	250	275	300	340	430	540
		(cu m/min)	5.66	6.37	7.08	7.79	8.50	9.63	12.18	15.28
	HORSEPOWER	(hp)	45	50	55	63	70	75	95	120
		(kW)	33.56	37.28	41.01	46.98	52.20	55.93	70.84	89.70
	ABRASIVE	(lb/hr)	1200	1350	1500	1700	1850	2025	2525	3240
		(kg/hr)	544	612	680	771	839	919	1145	1470
#10 5/8 inch (16 mm)	AIR	(cu ft/min)	300	350	400	450	500	550	700	880
		(cu m/min)	8.50	9.91	11.33	12.74	14.16	15.58	19.82	24.90
	HORSEPOWER	(hp)	70	80	90	100	110	120	150	190
		(kW)	52.20	59.66	67.11	74.57	82.03	89.48	111.85	142.02
	ABRASIVE	(lb/hr)	1900	2200	2400	2700	3000	3300	4000	5200
		(kg/hr)	862	998	1089	1225	1361	1497	1814	2359
#12 3/4 inch (19 mm)	AIR	(cu ft/min)	430	500	575	650	700	800	1100	1255
		(cu m/min)	12.18	14.16	16.28	18.41	19.82	22.66	31.15	35.52
	HORSEPOWER	(hp)	100	115	130	145	160	175	215	245
		(kW)	74.57	85.76	96.94	108.13	119.31	130.50	160.33	183.13
	ABRASIVE	(lb/hr)	2700	3100	3500	3900	4300	4700	5700	7375
		(kg/hr)	1225	1406	1588	1769	1950	2132	2586	3345

This table is to be used as reference only. Actual results may vary depending on specific abrasive medium used. This table is based on abrasive with a bulk density of 100 pounds per cubic foot.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): HW-1

1. Name or type and model of proposed affected source:

Hotsy natural gas-fired water heater (Model # 1832SS; rated at 0.6 MMBTU/hr) for Hotsy vehicle washing system.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

NA

4. Name(s) and maximum amount of proposed material(s) produced per hour:

NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Natural gas-fired water heater rated at 0.6 MMBTU/hr.

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

NA

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air: NA

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

One heater rated at 0.6 MMBTU/hr.

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input: 0.6 × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	0.06	lb/hr	grains/ACF
b.	SO_2	0.0003	lb/hr	grains/ACF
c.	CO	0.05	lb/hr	grains/ACF
d.	PM_{10}	0.004	lb/hr	grains/ACF
e.	Hydrocarbons	---	lb/hr	grains/ACF
f.	VOCs	0.003	lb/hr	grains/ACF
g.	Pb	---	lb/hr	grains/ACF
h.	Specify other(s)			
	CO2e	67.0	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
None proposed.	None proposed.
REPORTING	TESTING
None proposed.	None proposed.

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None.

1-800-525-1976
www.hotsy.com

Model: 1832SS

#(1.109-662.0)

Type: Hot water, high pressure, electric powered stationary washer. Machine shall be capable of operating on fresh water. Machine shall be manually operated with appropriate safety controls. Must be ETL, UL, CGA or CSA certified. Must conform to UL standard 1776 for pressure washers. All equipment built in an ISO-9001; 2008 registered factory.

Discharge, gpm/lpm	6.0/22.8	**Burner Fuel**	Natual Gas
Pressure, psi/bar	3000 (207 Bar)	**Btu/hr**	558, 050
Electric Motor, hp	15.0	**Amps**	38
Volts	230/ 3 phase		

Pressure Hose:

Fifty-foot discharge hose shall be 3/8" I. D. double wire braid type meeting or exceeding SAE100R2 performance specifications. Shall be equipped with swedge and 2ft (610mm) strain relief collars located on the hose end closest to the operator in compliance with UL 1776 safety standard. Hose shall have a 3 to 1 safety rating, with an operating pressure of 4500 PSI *(310 bar)* at 275°F *(135°C)*.

Trigger Gun:

Insulated pistol type safety shut off gun supplied shall be rated for 10.5gpm (39.75) at 5075psi (349.9 bar) and 320°F (160°C). Constructed of PA66 Nylon shell with cast brass body, stainless steel seat and ball check.

Wand:

A 48" *(122 cm)* chrome plated wand with Zytel polymer insulated grip and side handle for operator safety and comfort.

Nozzles:

Appropriate identifiable high-pressure nozzles shall be supplied in 0°, 15° and 40° spray patterns. Nozzles shall be a hardened stainless steel material with 1/4" male quick coupler fittings for ease of use.

Pump Drive:

Belt drive system with Triple groove cast iron pulleys and grip notch V-section Triple banded belt. Belt system features auto tensioning arm for proper belt alignment, tension and extended life. Belts and pulleys to be covered for operator safety.

High Pressure Pump:

The high-pressure pump shall be a Hotsy pump with ceramic plungers, oil bath crankcase, forged brass head rated for pressures up to 3000 psi *(207 bar)* with NESTechnology and high temperature Buna-N and cloth U-seals. The pump shall feature a 7 year crankcase warranty.

Unloader Valve:

The pressure washer shall be equipped with a pressure-trapping unloader rated for a minimum of 3000 psi *(207 bar)*. Unloader shall operate in conjunction with single trigger gun to provide safe operation in starting and stopping water flow through the nozzle.

Chassis:

Machine shall be welded steel frame with enclosed pump motor cabinet and bolt on stainless steel tank wrap. All painted material shall be painted with epoxy powder coating.

Electrical / Controls:

Machine shall have control panel with the following: Lexan plastic operating instructions and safety information in English, French and Spanish, attached by high strength adhesive. Magnetic motor control with overload protection. Individual burner and motor rocker style momentary switches. Adjustable thermostat, hour meter and detergent metering valve. All controls to be located in an enclosure to protect from moisture. Machine operation shall be controlled with a programmable smart Controller. Machine is pre-wired for remote installations. The electrical motor shall have thermal overload protection to meet NEC code and ODP rated.

Burner System:

Must comply with CSA standard B140.11-M89 and CAN1-2-2.17-M91 for commercial-industrial steam cleaning machines or UL 1776 standard for pressure washing equipment. Burner shall be naturally aspirated with burner spuds mounted in a ring configuration. Manually operated pilot shut-off valve shall be provided to independently shut-off gas supply to pilot. Machines shall be equipped with 24 volt electronic spark ignition. A sealed pressure switch shall control opening and closing of gas valve.

Heating Coil:

Schedule 80 A63 cold-formed pipe with a material thickness of 0.154 (3.91 mm). Pipe O. D. 1.050 (26.67 mm). Overall pipe length of 165 Ft. (53.3 m). Welding to be performed to ASME standards. Heating coil skin to be aluminized steel for corrosion resistance. Heating coil to be insulated with fiberfrax ceramic blanket.

Pressure Relief Valve:

This device shall be located at the discharge port on the coil for over pressurization protection and safety of operator.

Detergent Application:

This equipment shall have the capability of applying detergent at a preset ratio determined by the owner. Detergents shall be introduced on the inlet side of the high pressure pump, allowing detergents to be applied at high pressure and allowing the benefits of coil cleaning additives to be applied to the inside of the heating coil.

Water Supply System:

Reinforced polyethylene water tank with automatic float shut-off valve shall be permanently mounted to machine to supply water to high pressure pump. It is designed to meet back flow prevention standards as they apply to this equipment. A fine mesh filter screen shall be installed at two locations, preventing debris from entering high pressure pump.

Auto Start/Stop with Shutdown:

Machine to feature in smart control, pre-programmed, auto start/stop and auto shutdown (time delay shutdown) to turn the machine off in the event the machine is left on and unattended. These features can be turned off, or times adjusted as needed and/or required by the customer.

Dimensions:

Length; 51", Width; 31", Height; 53.25", Shipping Weight; 1020 lbs.

Options:

LP, Remote Boxes, Electronic Detergent Inlet,
Electronic Water Inlet

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): GC-1

1. Name or type and model of proposed affected source: Uni-ram COMBO455 (or equivalent) Automatic Spray Gun Cleaner/Solvent Recycler
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.
3. Name(s) and maximum amount of proposed process material(s) charged per hour: NA
4. Name(s) and maximum amount of proposed material(s) produced per hour: NA
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X		lb/hr	grains/ACF
b.	SO_2		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM_{10}		lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs	Fugitive emissions included in General Clean-up/Solvent Cleaning Operations.	lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
	HAP	Fugitive emissions included in General Clean-up/Solvent Cleaning Operations.	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Applicant proposes to maintain monthly records of the type and quantity of spray gun cleaner solvents used at the facility.	Applicant proposes to maintain monthly records of the type and quantity of spray gun cleaner solvents used at the facility.
REPORTING	TESTING
None proposed.	None proposed.

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None.


Uni-ram
The Complete Solution
PAINT GUN CLEANER WITH AUTOMATIC SOLVENT RECYCLING
Environmentally FRIENDLY
COMBO455
MODULAR COMBO 5E40
500P2
UG7500
MODULAR COMBO 5E75

PAINT GUN CLEANER WIT

Cleaning Features of COMBO455 and Modular COMBOS

Automatic Cleaning

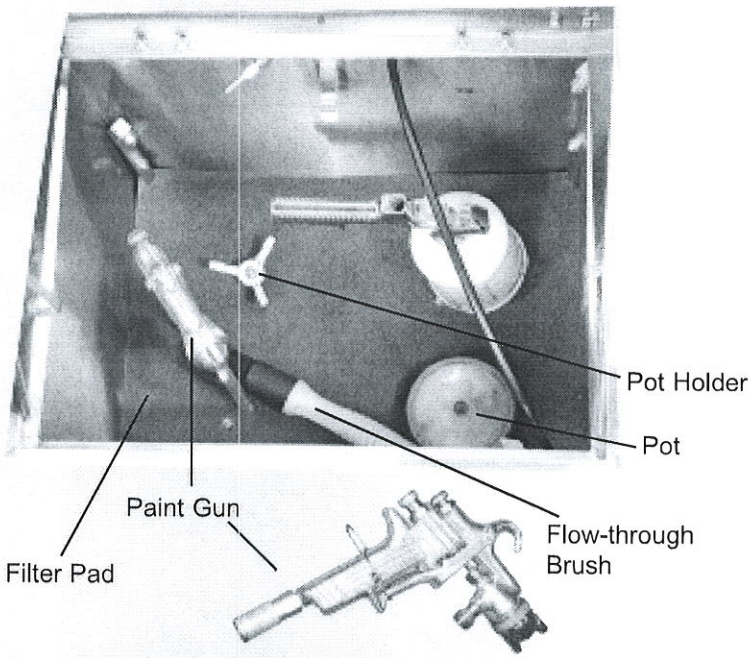
Getting Ready For The Next Paint Job is QUICK and EASY

- Load the Stainless Steel Tank with dirty guns and pots. Close lid.
- Activate the wash, air flush and rinse cycles by simply turning one dial and pressing two buttons.
  In under 60 seconds your guns and pots are clean and ready for action.

Manual Cleaning

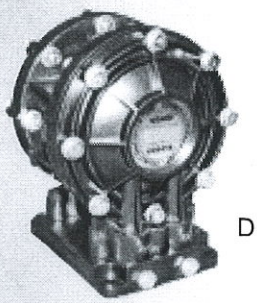
- Clean paint guns using the Flow-through brush (and spigot on the COMBO5E75).
- Solvent flow activated by "Hands Free" foot pedal.

Stainless Steel Tank



All Models

- Wash cycle is powered by heavy-duty diaphragm pump.
- Unit comes with air pressure regulator and filter. Requires minimum air pressure of 85 PSI.
- Stainless steel delivery tubes, suction pipe and rinse pump are constructed from corrosive resistant stainless steel.



Diaphragm Pump

- Streams of solvent that swirl from 14 jets and nozzles wash paint from inside and outside of guns and pots.
- Tank accommodates 2 Pots, 2 Paint Guns (siphon, pressure, gravity feed).
- Tank - 17" w x 13" d x 13" h
- Replacement Filter Pad; FP6500-10 (10 pack)

Health and Safety Features

- **Factory Mutual Certified.**
- Safety Switch terminates cleaning cycle when lid is raised.
- Built-in vent automatically extracts fumes.
- Automatic cleaning is **"Hands Free"**. Operator has minimal exposure to Solvent.
- Solvent Pail is kept inside cabinet.

H AUTOMATIC SOLVENT RECYCLING

Modular COMBOS

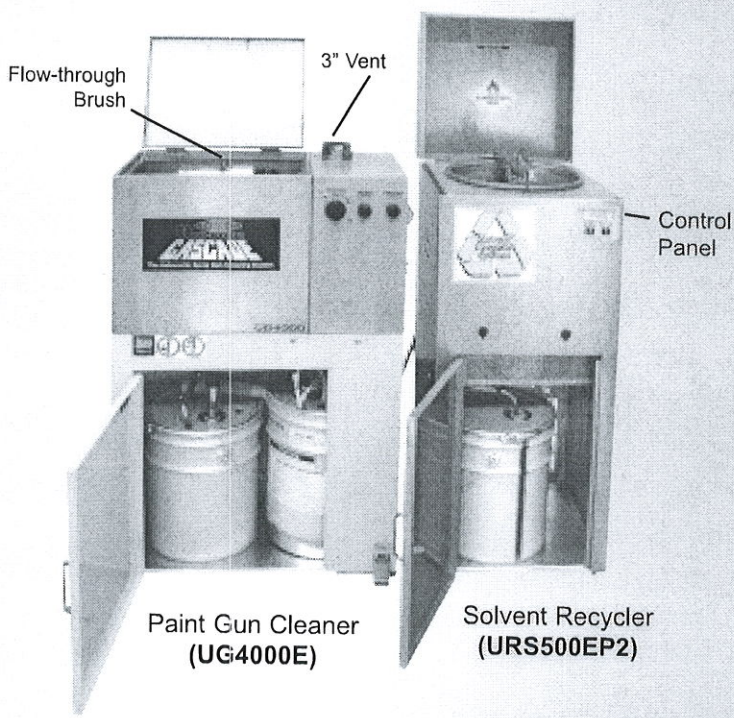
Common Features of Modular COMBOS

- Automatic and manual paint gun cleaning.
- Paint gun cleaner is available for use while the solvent recycler operates.
- Solvent recycler can be located on opposite side of a wall - in a different room for convenience.
- Recycler can operate independently and recycle solvent from other sources.

Economical COMBO5E40

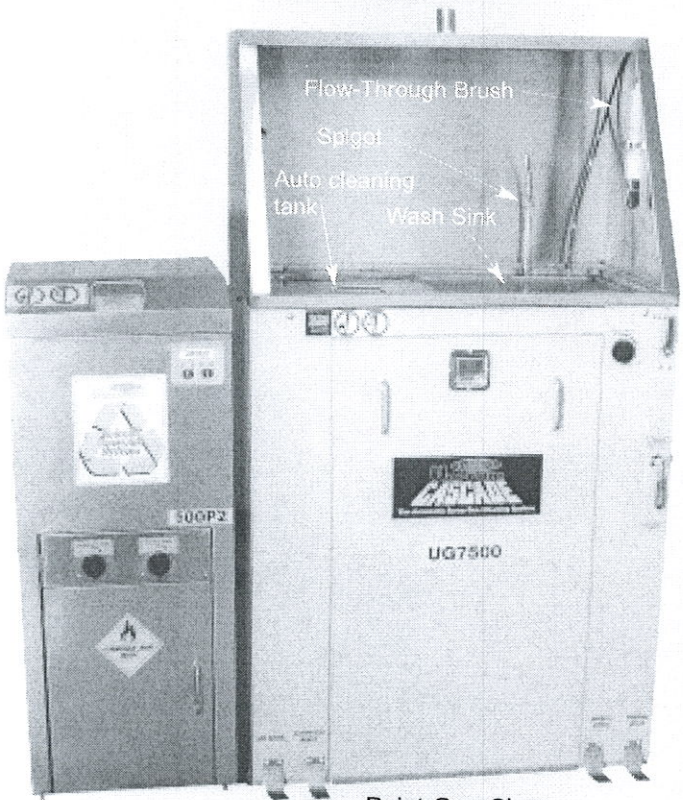
- Automatic wash, air purge and clean-rinse.
- Manual clean-rinse using Flow-through brush, activated by "Hands Free" pedal.
- Dimensions: 49" w x 20" d x 44" h
  Weight: 218 lbs

COMBO5E40



Paint Gun Cleaner **(UG4000E)**

Solvent Recycler **(URS500EP2)**



Solvent Recycler **(URS500EP2)**

Paint Gun Cleaner **(UG7500E)**

COMBO 5E75

COMBO5E75

State of the Art Manual Cleaning

- Clean Guns manually above conveniently located large sink.
- Wash spray guns with recirculating solvent using Flow-through brush.
- Rinse guns using flexible spigot.
- Activate solvent flow using "Hands-Free" pedal.
- Initiate overhead vent with On-Off valve.
- Hose Cleaning - Wash and Clean-rinse pressure pot hose in under 60 Seconds.

COMBO5E75L is the COMBO5E75 with the additional capability of testing spray guns after cleaning. Complete with connection for an air line.

Paint Gun Cleaner With Automatic Solvent Recycling

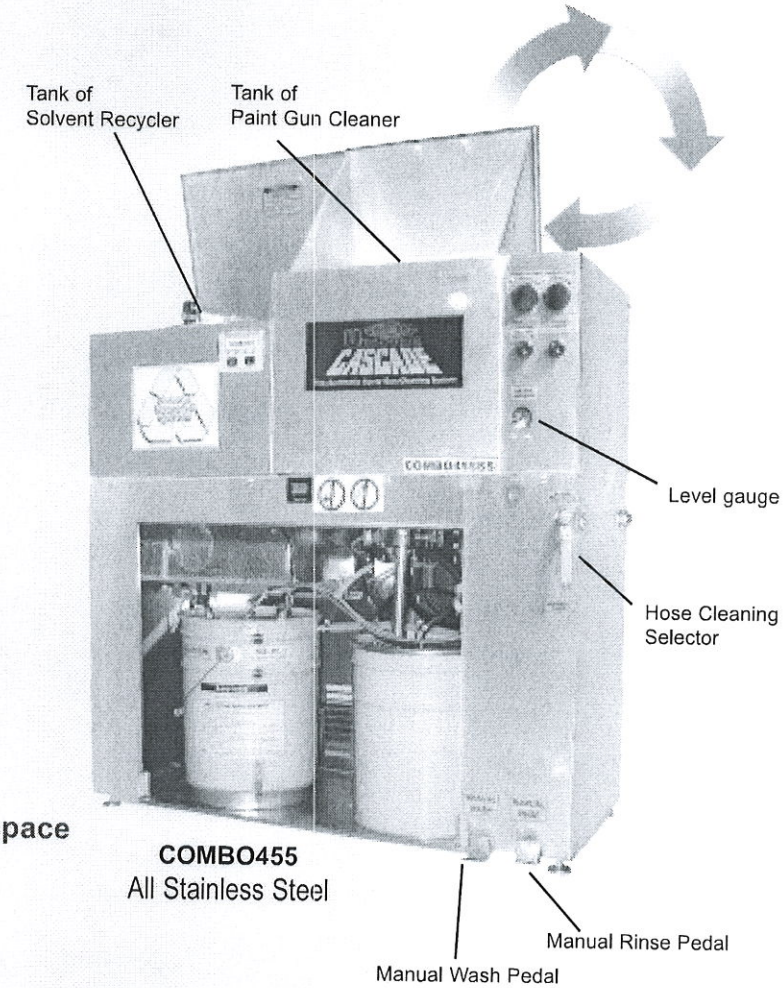
All-In-One COMBO455

Features:

- Automatic and Manual Paint Gun Cleaning.
- Hose Cleaning: Hose is flushed with Wash Solvent, Air, Clean Solvent and Air, all in less than 60 seconds.
- Level Gauge For Clean Solvent Pail indicates time to recycle.
- Durable, rust free stainless steel construction for years of service.
- Recycles 5 US gal in about 4 hours.
- Pressure regulator and moisture filter
- Complete with corrosive resistant pails

Dimensions: 40" w x 17" d x 42" h
Weight: 260 lbs
Power Supply: 120 V, 13.5 A, 1,500 W Heater

Ideal for the busy shop with limited space



COMBO455
All Stainless Steel

COMBO MODELS

COMBOS	SOLVENT RECYCLER	GUN CLEANER
COMBO5E40	URS500EP2	UG4000E
COMBO5E75	URS500EP2	UG7500E
COMBO455	URS500EP2	UG4000E

Other Available Models

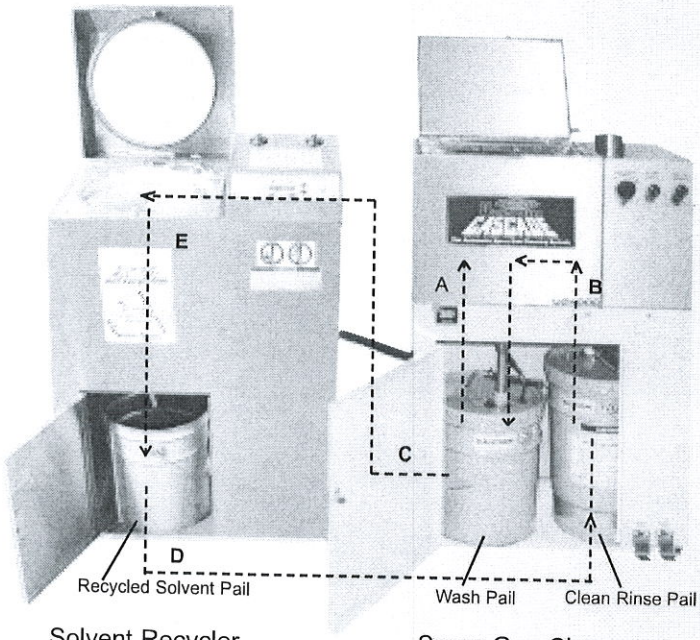
- COMBO**6**E40, COMB0**6**E75, COMBO**6**E75L and COMBO45**6** includes the URS600EP2, solvent recycler.
- COMBO**9**E40, COMB0**9**E75 and COMBO9E75L includes the URS900EP2 solvent recycler.

Features of Solvent Recyclers

URS500EP2
- Power supply: 120 V, 1,500 W Heater.
- Recycles solvent in 4-6 hours.
- 6 Temperature Set Points from 90°C (194° F) to 200°C (392° F).
- The **5** in the COMBO model number indicates the URS**5**00EP2 solvent recycler.

URS600EP2
- Same as the URS500EP2 but with 240 V input rather than 120V.

URS900EP2
- Power supply: 240 V, 2,100 W Heater.
- Recycles solvent in 4-6 hours.
- Digital display, Temperature Set Points from 75 °C (167 °F) to 200 °C (392 °F) in single digit increments.
- The **9** in the COMBO model number indicates the URS**9**00EP2 recycler.



Solvent Recycler
(URS900EP2)

Spray Gun Cleaner
(UG4000E)

Closed Loop System

COMBO 9E40
Dimensions: 60" w x 30" d x 44" h
Weight: 263 lbs

Solvent flow for Modular COMBO

<---- Solvent Flow

A Wash paint guns
- *Turn wash timer*

B Rinse paint guns
- *Press Clean Solvent Rinse Button*

C Transfer wash solvent for recycling
- *Turn Filling Timer*

D Transfer previously recycled solvent to clean rinse pail and wash pail
- *Turn Transfer Timer*

E Recycle solvent
- *Press "ON"*

Use the Recycler to reclaim gun cleaner solvent as well as solvent from other sources in the shop.

Solvent Recycling

On-Site recycling eliminates the need to haul dirty solvent off-site for disposal. Costs drop dramatically with on-site recycling. *For a company that generates one 55 gallon drum of dirty solvent per month costs drop by $9,205 per year due to lower solvent purchases and disposal costs. See below.*

Sample Cost Analysis

COST FOR OFF-SITE DISPOSAL	
Waste Solvent per month (US gal)	55
Waste solvent per year (US gal)	660
Solvent replacement cost (@$5.00/gal)	$3,300
Solvent disposal cost (@$ 6.00/gal)	$3,960
Rental of Gun Cleaner $/yr	$3,000
Total (A)	$10,260

COST FOR ON-SITE RECYCLING	
Top up with virgin solvent (10% of annual usage at $5.00/ gal)	$ 330
Disposable Bags ($3.60 x 132 bags/ yr)	$ 475
Disposal of solid waste ($250/ drum)	$ 250
Total (B)	$1,055
Annual Savings (A-B)	$9,205

Note: Actual cost may vary depending on solvent consumption, rates, disposal costs and evaporation rates.

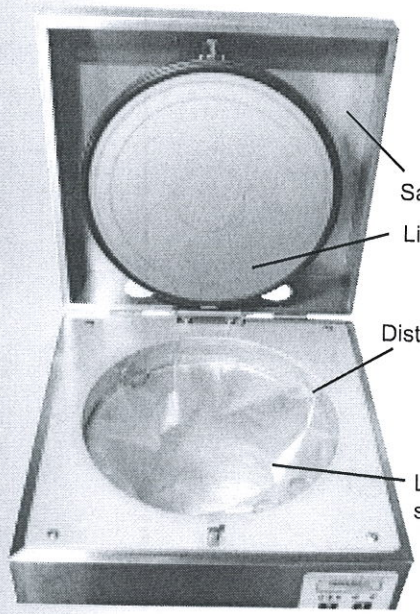
SOLVENT REQUIREMENTS	
• Distillation temperature between 75°C (167° F) to 200°C (392° F) • Ignition point above 230°C (446° F)	• Safety caution: not for use with esters of nitrocellulose often found in wood resins.

Replacement Liner Bag: L B900C - 10 10 pack
L B900C - 100 10 pack

Paint Gun Cleaner with Automatic Solvent Recycling

On-Site Solvent Recycling

- Provides clean solvent every day.
  Clean solvent washes spray guns better and faster.
- Eliminates the need to haul dirty solvent off-site for disposal.
  No solvent manifest to complete. On-site recycling reduces generator status.
- Lowers solvent purchase and disposal costs.



Easy to Use:
To recycle dirty solvent, simply press "ON".

Key pad

HEATING SYSTEM: Direct heating by explosion-proof, sealed heater.

Safety Features

APPROVALS: Certified to UL Standard 2208 and CSA Standard 22.2 No. 30 and 88 and approved for use in non-hazardous (non-classified) locations and hazardous locations Class 1 Division 1; Class 1 Division 2.

CONTROL SYSTEM: Operational control and continuous monitoring by micro-processor. Many built-in safety programs. Self-diagnostic with digital display.

CERTIFIED TO CSA C22.2 No. 30

CONFORMS TO UL Standard No. 2208

PRESSURE RELIEF SYSTEM: Prevents pressure build up over 1.0 PSI.

Purchase or Lease
1 Year Full Warranty
2 Year Exchange Warranty on Pumps
Extended Warranty Available

CORPORATION , Manufacturer of Paint Gun Cleaning - Solvent Recycling Systems

171 Cooper Ave, Suite #108, Interstate Commerce Center,
Tonawanda, New York 14150
Phone: 716-874-8890 Fax: 716-874-8893
USA E-mail: salesusa@uniram.com
USA toll free: 1-800-735-4331

381 Bentley Street,
Markham, Ontario L3R 9T2
Phone: 905-477-5911 Fax: 905-477-8922
Canadian E-mail: salescan@uniram.com
Canada toll free: 1-800-417-9133

www.uniram.com

Cascade Patent Numbers: Canada, 1293909 U.S.A., 5876567 Europe, EP 0300248 Japan, 1-302098
Information subject to change without notice. Printed in Canada Uni-Ram Corporation Rev. Mayt. 2004
Uni-Ram Corporation, Manufacturer of Gun Cleaners and Solvent Recycler systems

B3 2004 05 20

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): VC-1

1. Name or type and model of proposed affected source: Fugitive emissions from General Clean-up/Solvent Cleaning & Misc. Operations. Includes body work using putty, body fillers and pastes, spray gun cleaning/solvent recycling, parts cleaning, and general solvent clean-up.
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.
3. Name(s) and maximum amount of proposed process material(s) charged per hour: NA
4. Name(s) and maximum amount of proposed material(s) produced per hour: NA
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: NA

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): NA

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X		lb/hr	grains/ACF
b.	SO_2		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM_{10}		lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs	Varies	lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
	Total HAP	Varies	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Applicant proposes to maintain monthly records of the type and quantity of clean-up solvents used at the facility.	Applicant proposes to maintain monthly records of the type and quantity of clean-up solvents used at the facility.
REPORTING	TESTING
None proposed.	None proposed.

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NA

Attachment M

Control Device Sheets

FIL-1	Paint Spray Booth Filter Media
DC-1	Grit Blasting Booth Dust Collector

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): FIL-1

Equipment Information

1. Manufacturer: Air Flow Technology Inc. Model No. 15g	2. Control Device Name: Paint Spray Booth Filter Type: Filter Media
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected: Approx. 100% of PM-10 paint solids is either applied to the part, coats the inside of the spray booth, or is captured by the filter media.	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume: 34,000 SCFM (each stack)	10. Capacity: NA
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any. NA	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse or disposal. Used paint booth filters will be sampled, analyzed, and profiled in accordance with EPA and DOT regulations, then shipped off-site via appropriate transportation for disposal at a licensed, insured waste facility permitted to accept the involved waste.	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☒ Yes	☐ No
Are metals present?	☒ Yes	☐ No

15. Inlet Emission stream parameters: NA	Maximum	Typical
Pressure (mmHg):		
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor
☒ Particulate (type): Paint solids ☐ Other

17. Inlet gas velocity: ft/sec

18. Pollutant specific gravity:

19. Gas flow into the collector:
34,000 ACF @ 85 °F and ambient PSIA

20. Gas stream temperature:
Inlet: 85 °F
Outlet: 85 °F

21. Gas flow rate:
Design Maximum: 34,000 ACFM
Average Expected: 34,000 ACFM

22. Particulate Grain Loading in grains/scf:
Inlet:
Outlet:

23. Emission rate of each pollutant (specify) into and out of collector: **(total for both vents PB-1E & PB-2E)**

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A PM10	16.41	0.056	100	0.2	0.00069	98.81
B						
C						
D						
E						

24. Dimensions of stack: Height 31.25 ft. Diameter 24” x 54”

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution

26. Complete the table:	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Not Available	
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): None.

28. Describe the collection material disposal system:
Used paint booth filters will be sampled, analyzed, and profiled in accordance with EPA and DOT regulations, then shipped off-site via appropriate transportation for disposal at a licensed, insured waste facility permitted to accept the involved waste.

29. Have you included ***Other Collectors Control Device*** in the Emissions Points Data Summary Sheet? Yes.

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: None proposed.	RECORDKEEPING: None proposed.
REPORTING: None proposed.	TESTING: None proposed.

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 98.81% PM

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 98.81% PM

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

Used filter media will be replaced with new filter media as-needed, approximately every two weeks.

AIR FLOW TECHNOLOGY inc.

Complies with EPA/NESHAP Standard 40 CFR Part 63!

FIBERGLASS PAINT ARRESTOR PADS & ROLLS

Patent Pending

Air Flow Technology's fiberglass overspray (extraction) collector rolls and pads are available in a variety of widths, weights, and depths. Standard weights include our 15g/ft^2, 18g/ft ft^2 (w/polyester backing), and 22g/ ft^2.

Media Design:

15g The progressively dense two-stage 15g media is manufactured from continuous strands of glass fibers engineered to collect and retain a wide range of automotive and industrial-type coatings. The backing is a tightly woven 100% fiberglass construction allowing low initial static pressure. This widely popular overspray media is green/white in color and provides compliant efficiency at an economical price. Air Enters White Side, Air Exits Green Side

22g The progressively dense heavy-duty two-stage 22g media is 50% heavier than the 15g counterpart thus providing additional service life and removal efficiency. As with the 15g product, the 22g product is manufactured from continuous strands of glass fibers with a 2.5" loading area backed with a 100% fiberglass scrim backing. The 22g is compliant with current EPA standards as well as many local municipal regulations. The 22g fiberglass construction provides excellent removal efficiency at an economic price. Air Enters White Side, Air Exits Yellow Side

18g (PB) The progressively dense three-stage 18g media (with polyester backing) is a combination of the 15g technology with the added high removal efficiency of a polyester backing. As with the 15g products, the 18g poly-backed product features a 100% fiberglass entry layer and tightly woven fiberglass scrim backing. Unlike the 15g, the 18g includes a 100% synthetic polyester backing which ensures some of the highest removal efficiencies available to modern overspray collectors. The 18g poly-backed product provides the highest removal efficiency of the three standard AFT fiberglass filters.

PERFORMANCE DATA

Fiberglass Overspray Collector Facts:

1. Fiberglass is one of the fastest growing air filtration media in the marketplace. Characteristics inherent to fiberglass make it a safe, low-cost, environmentally friendly alternative to other products such as cellulose, synthetic, or styrofoam products.
2. Fiberglass typically has the lowest initial static pressure of all overspray collectors. This means the filter provides better air-flow from the start, and, tends to maintain better air-flow for a longer period of time.
3. Unlike any other overspray collector, Fiberglass is highly compressible. This translates to lower manufacturing, distribution, freight, storage, and disposal costs.
4. Fiberglass is a powerful, low-cost pre-filter when used in combination with any of AFT's diverse line of secondary panel filters and multi-pocket cubes.

Overspray Collection Options:

From intake air to emissions control, Air Flow Technology can help you identify the most efficient filtration combination for your particular booth. AFT offers a complete range and various configurations of Intake Air and Exhaust Filtration products.

Filter Type	*Average Efficiency (%)**	*Capacity (lbs/20"x20" Pad)*	*Initial Resistance ('w.c.)*
15g	98.81	0.9	0.02
22g	99.03	1	0.02
18g (PB)	99.79	2.4	0.02

- All Air Flow Technology fiberglass filters are rated UL Class 2 for flammability
- All Air Flow Technology filters are tested per ASHRAE 52.1 and comply with EPA Standard 40 CFR Part 63

Air Flow Technology provides independent test data on particle size efficiency and initial resistance to rated air flow on all of its paint filtration products. This information is provided to assist you in the proper selection of a filter system for your particular application. Whether your requirement is low static pressure (resistance) or high performance, you can depend on the independent data provided to guide your selection process to the proper AFT product.

For other quality HVAC, Industrial Finishing, and Paint Spraybooth Filtration Products, refer to HVAC Filtration All Product Bulletin HPB1, and Paint Spray Booth Filtration All Product Bulletin PPB1.

AIR FLOW TECHNOLOGY inc.

Kenosha, WI 53144

(0) 800-537-5454 (F) 262-657-2210

(E) sales@airflowtechnology.com

www.airflowtechnology.com

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): DC-1

Equipment Information

1. Manufacturer: Abrasive Blast Systems, LLC Model No. ADFT 4-48	2. Control Device Name: Grit Booth Dust Collector Type: Cartridge Filter
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected: Approx. 100% of the grit solids either falls to the grit booth floor and is reused, or it is captured by the filter media.	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume: 24,500 SCFM	10. Capacity: NA
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any. NA	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse or disposal. Waste grit and used grit booth dust collector filter cartridges will be sampled, analyzed, and profiled in accordance with EPA and DOT regulations, then shipped off-site via appropriate transportation for disposal at a licensed, insured waste facility permitted to accept the involved waste.	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☒ Yes	☐ No
Are metals present?	☒ Yes	☐ No

15. Inlet Emission stream parameters: NA	**Maximum**	**Typical**
Pressure (mmHg):		
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor
☒ Particulate (type): Aluminum oxide grit ☐ Other

17. Inlet gas velocity: ft/sec

18. Pollutant specific gravity:

19. Gas flow into the collector:
24,500 ACF @ ambient °F and ambient PSIA

20. Gas stream temperature:
Inlet: ambient °F
Outlet: ambient °F

21. Gas flow rate:
Design Maximum: 24,500 ACFM
Average Expected: 24,500 ACFM

22. Particulate Grain Loading in grains/scf:
Inlet:
Outlet:

23. Emission rate of each pollutant (specify) into and out of collector: (Vents inside building)

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A PM-10	10.63	0.051	100	0.001	0.000005	99.99
B						
C						
D						
E						

24. Dimensions of stack: Height NA (Vents inside building) ft. Diameter 36” x 22”

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution

26. Complete the table:	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
Particulate Size Range (microns)	Weight % for Size Range	Weight % for Size Range
0 – 2	Not Available	
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): None.

28. Describe the collection material disposal system:
Waste grit and used grit booth dust collector filter cartridges will be sampled, analyzed, and profiled in accordance with EPA and DOT regulations, then shipped off-site via appropriate transportation for disposal at a licensed, insured waste facility permitted to accept the involved waste.

29. Have you included ***Other Collectors Control Device*** in the Emissions Points Data Summary Sheet? Yes.

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: None proposed.	RECORDKEEPING: None proposed.
REPORTING: None proposed.	TESTING: None proposed.

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99.99% PM-10

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99.99% PM-10

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

Used filter cartridges will be replaced with new cartridges as-needed, approximately every two weeks.

Attachment N

Supporting Emissions Calculations

4305 First Avenue (WV), LLC - Nitro Annex
Application for Rule 13 Construction Air Permit - Attachment N Emission Calculations

Rev. 15 AUG 2016

Paint Booth (Source ID# PB-1) Coatings Data and As-Mixed Emissions

Class	Coating Materials	Density	Solids	VOC	Exempt solvent	VOC content	Ethylbenzene		Naphthalene		Cumene		Xylene		Toluene		MIBK		Total organic HAP	
		lbs/gal	wt. pct.	wt. pct.	vol. pct	lbs/gal	wt. pct.	lbs/gal	wt. pct.	lbs/gal	wt. pct.	lbs/gal	wt. pct.	lbs/gal	wt. pct.	lbs/gal	wt. pct.	lbs/gal	wt.pct.	lbs/gal
Primer/sealer	Corlar 825P28300 Black Epoxy Primer	10.46	59.1	40.9	1	4.28	0.6	0.06	0.3	0.03		0.00	2	0.21		0.00		0.00	2.9	0.30
Primer/sealer	Corlar 825P30020 Gray Epoxy Primer	12.28	72.1	27.9	0	3.42	0.4	0.05		0.00	0.1	0.01	2	0.25		0.00		0.00	2.5	0.31
Primer Additive	937S Epoxy Primer Activator - Slow	7.64	54.8	45.2	0	3.45	1.8	0.14		0.00		0.00	7	0.53		0.00		0.00	8.8	0.67
Primer Additive	948S Epoxy Primer Activator - Extra Slow	7.96	62.2	37.8	0	3.01	0.7	0.06		0.00	0.2	0.02		0.00		0.00		0.00	0.9	0.07
Topcoat	Imron 851678EX Elite Manitowoc Red	8.86	58.8	41.2	1	3.65		0.00		0.00		0.00		0.00		0.00		0.00	0.0	0.00
Topcoat Activator	Imron 15305S Activator	8.72	66.0	34.0	0	2.96		0.00		0.00		0.00		0.00		0.00		0.00	0.0	0.00
Clear Coat	CRV22 Acrylic Urethane Clear	8.14	37.2	46.1	13.84	3.75		0.00		0.00		0.00	1	0.08		0.00		0.00	1.0	0.08
Clear Coat Activator	CR22AM Activator	8.08	52.1	47.9	0	3.87		0.00		0.00		0.00		0.00		0.00	20	1.62	20.0	1.62
Clear Coat Reducer	KEY81 Medium Urethane Reducer	7.43	0	100	0	7.43		0.00		0.00		0.00		0.00	30	2.23		0.00	30.0	2.23

Notes:

1. Weight percentages listed for individual organic HAPs are the maximum weight percentages given on the product safety data sheets. Any HAP chemical listed at less than 0.1% content in any coating or additive is not included in these calculations.

As-mixed		Mix		Density	Exempt solvent	VOC		Ethyl benzene	Naphthalene	Cumene	Xylene	Toluene	MIBK	Total organic HAP	Total Solids	Total Solids
		parts (vol)	vol. pct.	lbs/gal	vol. pct.	lbs/gal	lbs/gal-ES	lbs/gal	lbs/gal	lbs/gal	lbs/gal	lbs/gal	lbs/gal	lbs/gal	wt. pct.	lbs/gal
Primer (highest VOC)	Corlar 825P28300 Black Epoxy Primer	5	83.3	10.46	1.00	4.28	4.32	0.06	0.03	0.00	0.21	0.00	0.00	0.30	59.08	6.18
	937S Epoxy Primer Activator - Slow	1	16.7	7.64	0	3.45	3.45	0.14	0.00	0.00	0.53	0.00	0.00	0.67	54.83	4.19
	As-Mixed Coating	6	100	9.99	1	4.14	4.18	0.08	0.03	0.00	0.26	0.00	0.00	0.36	58.37	5.83
Primer (highest solids)	Corlar 825P30020 Gray Epoxy Primer	5	83.3	12.28	0	3.42	3.42	0.05	0.00	0.01	0.25	0.00	0.00	0.31	72.12	8.86
	948S Epoxy Primer Activator - Extra Slow	1	16.7	7.96	0	3.01	3.01	0.06	0.00	0.02	0.00	0.00	0.00	0.07	62.20	4.95
	As-Mixed Coating	6	100	11.56	0	3.35	3.35	0.05	0.00	0.01	0.20	0.00	0.00	0.27	70.47	8.15
Topcoat	Imron 851678EX Elite Manitowoc Red	3	75.0	8.86	1	3.65	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.79	5.21
	Imron 15305S Activator	1	25.0	8.72	0	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.00	5.76
	As-Mixed Coating	4	100	8.83	1	3.48	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.59	5.35
Clear	CRV22 Acrylic Urethane Clear	4	66.7	8.14	13.84	3.75	4.35	0.00	0.00	0.00	0.08	0.00	0.00	0.08	37.20	3.03
	CR22AM Activator	1	16.7	8.08	0	3.87	3.87	0.00	0.00	0.00	0.00	0.00	1.62	1.62	52.13	4.21
	KEY81 Medium Urethane Reducer	1	16.7	7.43	0	7.43	7.43	0.00	0.00	0.00	0.00	2.23	0.00	2.23	0.00	0.00
	As-Mixed Coating	6	100	8.01	9.23	4.38	4.83	0.00	0.00	0.00	0.05	0.37	0.27	0.70	33.49	2.68

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Paint Booth (Source ID# PB-1) & Associated Activities Calculations Summary & Rationale

Pollutant	Total Annual Vent & Fugitive Potential Emissions (tpy)
PM10	0.07
VOC	10.40
Total HA	2.34
Styrene	0.15
Ethylben	0.14
Xylene	0.51
Toluene	0.93
Naphthal	0.05
Cumene	0.02
Methanol	0.03
MIBK	0.52

Fugitive Emissions from Body Repair and Solvent Cleaning Activities:

Putty, Filler, Paste VOC & HAP Emissions Material	Potential usage lbs/day	Potential usage lbs/yr	VOC content wt. pct.	HAP content wt. pct.	Potential VOC Emissions lbs/day	Potential VOC Emissions tpy	Potential Styrene Emissions lbs/day	Potential Styrene Emissions tpy	Potential HAP Emissions lbs/day	Potential HAP Emissions tpy
Putty, body fillers, pastes	5	1,825	16.7	16.7	0.84	0.15	0.84	0.15	0.84	0.15

Notes:

1. VOC and HAP (styrene monomer) information taken from SDS for 3M Golden Extra body fillers, as a representative product.
2. Potential VOC and HAP emissions assume worst case 100 pct. loss of styrene monomer.

Solvent Cleaning VOC & HAP Emissions Material	Potential usage gal/day	Potential usage gal/yr	Density lbs/gal	VOC content wt. pct.	Potential VOC Emissions lbs/day	Potential VOC Emissions tpy	Potential Xylene Emissions wt. pct.	Potential Xylene Emissions tpy	Potential Toluene Emissions wt. pct.	Potential Toluene Emissions tpy	Potential MIBK Emissions wt. pct.	Potential MIBK Emissions tpy	Potential Methanol Emissions wt. pct.	Potential Methanol Emissions tpy
Precleaner (PPG DX330)	1	365	6.36	100	6.36	1.16	-	-	5.0	0.06	-	-	-	-
Grease, Wax & Silicone Remover (GRO-1705-5 / ADV-193)	0.5	183	6.39	100	3.19	0.58	-	-	7.0	0.04	-	-	-	-
Cleanup Solvent (Methyl Amyl Ketone)	2	730	6.76	100	1.35	0.25	-	-	-	-	-	-	-	-
Paint Gun Cleanup Solvent (Super 16 Paint Gun Cleaner)	2	730	7.02	100	1.40	0.26	10	0.03	60	0.15	10	0.03	10	0.03

Notes:

1. Potential VOC and HAP emissions from precleaner use assume worse case 100 pct. evaporative loss.
2. Cleanup solvent usage and work practices/pollution prevention measures are employed. A minimum of 90 pct. solv ent recovery/reduction in uncontrolled VOC/HAP emisisons is assumed.

Spray Booth Vents Total Point Source Emissions (totals for both vents PB-1E & PB-2E):

VOC Emissions Material	Potential usage max gal/hr	Potential usage gal/yr	VOC content lbs/gal	Potential VOC Emissions lb/hr	Potential VOC Emissions tpy
Coatings (primers, base color, clear coat) Worst case VOC content is CRV22 Acrylic Urethane Clear / CR22AM Activator / KEY81 Medium Urethane Reducer	5	3,650	4.38	21.92	8.00

Notes:

1. Potential VOC emissions are based on the highest VOC content of any as-mixed/as-applied primer, base color, or clear coat.

Total HAP Emissions Material	Potential usage max gal/hr	Potential usage gal/yr	Total organic HAP content lbs/gal	Potential Total Organic HAP Emissions lb/hr	Potential Total Organic HAP Emissions tpy
Coatings (primers, base color, clear coat) Worst case Total HAP content is CRV22 Acrylic Urethane Clear / CR22AM Activator / KEY81 Medium Urethane Reducer	5	3,650	0.70	3.48	1.27

Notes:

1. Potential emissions of total organic HAP are based on the highest total orgaic HAP content of any as-mixed/as-applied primer, base color, or clear coat.

Individual HAP Emissions Material	Potential usage max gal/hr	Potential usage gal/yr	Ethylbenzene lbs/gal	Ethylbenzene lbs/hr	Ethylbenzene tpy	Xylene lbs/gal	Xylene lbs/hr	Xylene tpy	Toluene lbs/gal	Toluene lbs/hr	Toluene tpy	MIBK lbs/gal	MIBK lbs/hr	MIBK tpy	Naphthalene lbs/gal	Naphthalene lbs/hr	Naphthalene tpy	Cumene lbs/gal	Cumene lbs/hr	Cumene tpy
Coatings (primers, base color, clear coat)	5	3,650	0.08	0.38	0.14	0.26	1.32	0.48	0.37	1.86	0.68	0.27	1.35	0.49	0.03	0.13	0.05	0.01	0.06	0.02

Notes:

1. Potential emissions of each single HAP are based on the highest single HAP content of as-mixed/as-applied primer, base color, or clear coat.

PM10 Emissions Material	Potential usage max gal/hr	Potential usage gal/yr	Solids content lbs/gal	Transfer Efficiency %	Filter Efficiency %	Potential Controlled PM10 Emissions lb/hr	Potential Controlled PM10 Emissions tpy
Coatings (primers, base color, clear coat) Worst case Solids content is Corlar 825P30020 Gray Epoxy Primer / 948S Epoxy Primer Activator - Extra Slow	5	3,650	8.15	60.00	98.81	0.19	0.07

Notes:

1. Potential PM10 emissions are based on the highest solids content of any as-mixed/as-applied primer, base color, or clear coat.
2. Spray paint transfer effiecincy from the HVLP spray gun to the parts sprayed is conservatively estimated at 60% (per guidance in PAINTING BASICS AND EMISSION CALCULATIONS FOR TCEQ AIR QUALITY PERMIT APPLICATIONS, Table 1, 10/11/2006).
3. All potential PM emissions are conservatively assumed to be PM10.

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Paint Booth Heaters (Source ID# HE-1, HE-2) Calculations Summary & Rationale

			Max. Annual Operating Hours = 8,760			Per Heater	
Pollutant	Emission Factor	Emission Factor Units	Emission Factor Basis / Source	Equation Used to Calc. Hourly Emis.	Design Heat Input (MMBtu/hr)	Max. Hourly Emis. (lb/hr)	Max. Annual Emis. (tpy)
Combustion Emission Estimates for each Heater							
NOx	100	lb/MMscf	AP-42, Table 1.4-1	[4]	4.00	0.37	1.62
CO	84	lb/MMscf	AP-42, Table 1.4-1	[4]	4.00	0.31	1.36
VOC	5.5	lb/MMscf	AP-42, Table 1.4-2	[4]	4.00	0.02	0.09
PM10	7.6	lb/MMscf	AP-42, Table 1.4-2	[4]	4.00	0.03	0.12
SO2	0.6	lb/MMscf	AP-42, Table 1.4-2	[4]	4.00	0.002	0.01
GHGs:							
CO2	120,000	lb/MMscf	AP-42, Table 1.4-2	[4]	4.00	444.033	1944.866
CH4	2.3	lb/MMscf	AP-42, Table 1.4-2	[4]	4.00	0.009	0.037
N2O	2.2	lb/MMscf	AP-42, Table 1.4-2	[4]	4.00	0.008	0.036
CO2e	---	---	---	---	---	446.7	1,956.4

NOTES:

NA = Not Applicable
NF = No Emission Factor

1. NATURAL GAS COMBUSTION EMISSIONS

a. Natural gas combustion emission factors (lb/mmcf) are based upon AP-42 Natural Gas Combustion Table 1.4-1 [Small Boilers (<100)-Uncontrolled] (Rev. 2/98) for NOx and CO, and Table 1.4-2 for PM(Total), SO2, and VOC.
b. Natural gas combustion emissions are based upon maximum natural gas firing rate of the proposed heaters.
c. Assumed natural gas heating value of 1,081 Btu/scf.

2. MAX. HOURS OF OPERATION

a. Based upon 24 hr/day, 7 days/wk, and 52 wk/yr, unless otherwise noted.

>>>CO2 Equivalent is based upon global warming potential values of 298 x tons N2O and 25 x tons CH4.

EXAMPLE EQUATION:

[4] Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lb/MMscf) x Design Heat Input (MMBtu/hr) x Conversion Factor (scf/1081 Btu)

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Hotsy Water Heater (Source ID# HW-1) Calculations Summary & Rationale

			Max. Annual Operating Hours = 8,760			Per Heater	
Pollutant	**Emission Factor**	**Emission Factor Units**	**Emission Factor Basis / Source**	**Equation Used to Calc. Hourly Emis.**	**Design Heat Input (MMBtu/hr)**	**Max. Hourly Emis. (lb/hr)**	**Max. Annual Emis. (tpy)**
NOx	100	lb/MMscf	AP-42, Table 1.4-1	[4]	0.6	0.06	0.24
CO	84	lb/MMscf	AP-42, Table 1.4-1	[4]	0.6	0.05	0.20
VOC	5.5	lb/MMscf	AP-42, Table 1.4-2	[4]	0.6	0.003	0.01
PM10	7.6	lb/MMscf	AP-42, Table 1.4-2	[4]	0.6	0.004	0.02
SO2	0.6	lb/MMscf	AP-42, Table 1.4-2	[4]	0.6	0.0003	0.001
GHGs:							
CO2	120,000	lb/MMscf	AP-42, Table 1.4-2	[4]	0.6	66.605	291.730
CH4	2.3	lb/MMscf	AP-42, Table 1.4-2	[4]	0.6	0.001	0.006
N2O	2.2	lb/MMscf	AP-42, Table 1.4-2	[4]	0.6	0.001	0.005
CO2e	---	---	---	---	---	67.0	293.5

NOTES:

NA = Not Applicable
NF = No Emission Factor

1. NATURAL GAS COMBUSTION EMISSIONS

a. Natural gas combustion emission factors (lb/mmcf) are based upon AP-42 Natural Gas Combustion Table 1.4-1 [Small Boilers (<100)-Uncontrolled] (Rev. 2/98) for NOx and CO, and Table 1.4-2 for PM(Total), SO2, and VOC.
b. Natural gas combustion emissions are based upon maximum natural gas firing rate of the proposed heater.
c. Assumed natural gas heating value of 1,081 Btu/scf.

2. MAX. HOURS OF OPERATION

a. Based upon 24 hr/day, 7 days/wk, and 52 wk/yr, unless otherwise noted.

>>>CO2 Equivalent is based upon global warming potential values of 298 x tons N2O and 25 x tons CH4.

EXAMPLE EQUATION:

[4] Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lb/MMscf) x Design Heat Input (MMBtu/hr) x Conversion Factor (scf/1081 Btu)

4305 First Avenue (WV), LLC - Nitro Annex
Application for Rule 13 Construction Air Permit - Attachment N Emission Calculations

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Grit Blasting Booth (Source ID# GB-1) Calculations Summary & Rationale

Abrasive Blasting PTE Calculator - Minnesota Pollution Control Agency

[downloaded from https://www.pca.state.mn.us/sites/default/files/p-sbap5-19.xls]
Potential to Emit Calculation
Abrasive Blasting: Gun #1

Facility Name	**ALL Crane-Nitro**
Date	8/15/2016

GUN 1

Enter the **Internal Nozzle Diameter**	7/16	inches
Enter the **Nozzle Pressure**	100	psig

Determine the flow rate: Using the values above and the chart below, determine the flow rate of abrasive material through the gun.

Flow Rate (lb of abrasive/hr) of Abrasive through the nozzle*

Internal Nozzle Diameter (in) ↓	Nozzle Pressure (psig) 30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	**940**
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Flow rate (from the chart above):	940
Select the type of Abrasive Material	Grit

The flow rates in the above chart are for sand. If you are using steel or aluminum oxide as your abrasive blast material, the spreadsheet will automatically convert the flow rate listed in the blue box above to these other abrasive material types.

	Sand (lb of abrasive/hour)	**Aluminum Oxide Grit** (flow rate of sand x (density of aluminum oxide/density of sand))*	**Steel** (flow rate of sand x (density of steel/density of sand))*
If needed, correct the flow rate from Sand to Aluminum Oxide or Steel:	940	1519	4624

Calculate Maximum Emissions (Potential to Emit)

Pollutant	**Flow Rate of Gun[1]** (lb abrasive/hr)	**Emission Factor[2]** (lb pollutant/ lb of abrasive)	**Uncontrolled Hourly Potential to Emit (PTE) for Gun 1** (flow rate x emission factor) (lb pollutant/hour)	**Uncontrolled Annual PTE for Gun 1 (in lb/yr)** emission rate x 1,040 hours/year*** (lb pollutant/year)	**Uncontrolled Annual PTE for Gun 1** (tons pollutant/year)	**Dust Collector Removal Efficiency** (%)	**Controlled Hourly PTE for Gun 1** (lbs pollutant/hr)	**Controlled Annual PTE for Gun 1** (tons pollutant/year)
PM (Particulate Matter)	1519	0.010	**15.19**	**15,799.6**	**7.9**	**99.99**	**0.002**	**0.001**
PM 10 (PM < 10 microns)	1519	0.007	**10.63**	**11,059.7**	**5.53**	**99.99**	**0.001**	**0.001**

1 Enter the flow rate of the gun based on the abrasive material used.

2 Pick your emission factors from the choices below.

Emission Factors for Abrasives*	PM (lb PM/lb abrasive)	PM10 (lb PM10/lb of Abrasive)**
Sand	0.041	0.029
Grit	0.010	0.007
Steel Shot	0.004	0.0034
Other	0.01	0.01

***** Flow rates, material densities, and emission factors for abrasives taken from STAPPA/ALAPCO Abrasive Blasting guidance (5/91)
** PM10 emissions derived from STAPPA/ALAPCO PM10 factors which were based on the amount of PM generated:
sand = 0.7 lbs PM10 per lb of PM; grit= 0.7 lb PM10 per lb of PM; Steel shot = 0.86 lb PM10 per lb of PM
For "Other", assume PM10=PM
*** Hours of operation based upon 4 hr/day, 5 days/wk, and 52 wk/yr.

ATTACHMENT P – Public Notice Class I Legal Advertisement

4305 First Avenue (WV), LLC will submit the required Class I legal advertisement to a local newspaper and will forward the original affidavit of publication to DAQ. The notice will be published no earlier than five (5) working days of receipt by DAQ of this application. The original affidavit of publication will be received by DAQ no later than the last day of the public comment period. The anticipated text of the legal ad to be published in the *Charleston Gazette-Mail* is as follows:

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that 4305 First Avenue (WV), LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit for its proposed Maintenance Facility located on 4301 1st Avenue, in Nitro, in Putnam County, West Virginia. The latitude and longitude coordinates are: 38.447331 and -81.830302.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be:

Regulated Pollutant	Potential Annual Emissions in tons per year (tpy)
Carbon Monoxide	2.92
Nitrogen Oxides	3.48
Particulate Matter (PM)	0.33
PM-10	0.33
PM-2.5	0.33
Sulfur Dioxide	0.021
Volatile Organic Compounds	10.59
Total Regulated Hazardous Air Pollutants	2.34
Total Carbon Dioxide Equivalent	4,207

Startup of operation is planned to begin on or about the 1st day of November, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the 26th day of August, 2016.

By: 4305 First Avenue (WV), LLC
Chad Shamblin, General Manager
140 West 19th Street
Nitro, WV 25143