



December 10, 2015

William T. Rothwell II, PE, Engineer
NSR Permitting Section
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Subject: **SimEx Inc., St. Marys, WV**
WV Air Permit # R13-2357F
Application for Class II Administrative Air Quality Permit Update

Dear Mr. Rothwell,

Thank you for your November 12, 2015 Permit Applicability Determination letter where you indicated our proposed equipment additions consisting of a router/milling machine served by dust collector, a corner fold machine, and an orbital wrapper/packing machine are exempt from WVDEP air permit requirements. Pursuant to your recommendation in the letter, please find an application package for incorporating the permit exempt equipment into our current air permit #R13-2357F.

Should you have any questions concerning this application, please contact me at (304) 665-1104 or Steve Tomlin with Tomlin Environmental Consulting at (770) 529-9404 or stomlin@tomlin-env.com at your convenience.

Sincerely,

A handwritten signature in blue ink that reads 'David Robinson'.

David Robinson, Plant Manager
SimEx Vinyl Extrusions

Enclosure



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 (304) 926-0475
www.dep.wv.gov/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): <u>SimEx, Inc.</u>		2. Federal Employer ID No. (FEIN): <u>54-1962894</u>	
3. Name of facility (if different from above): <u>SimEx, Inc.</u>		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: <u>181 Pleasants Industrial Center</u> <u>St. Marys, West Virginia 26170</u>		5B. Facility's present physical address: <u>181 Pleasants Industrial Center</u> <u>St. Marys, West Virginia 26170</u>	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> 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:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO – If YES, please explain: <u>Owner of existing permitted facility.</u> – 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.): <u>Vinyl Compounding and Extrusion Facility</u>		10. North American Industry Classification System (NAICS) code for the facility: <u>326199</u>
11A. DAQ Plant ID No. (for existing facilities only): <u>073-00021</u>	11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): <u>R13-2357F</u>	

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

12A. <ul style="list-style-type: none"> – For Modifications, Administrative Updates or Temporary permits at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road; – For Construction or Relocation permits, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a MAP as Attachment B. <p style="margin-top: 10px;"><u>Facility is located in the Pleasants County Industrial Park, which is adjacent to W. Va. Route 2 and across Route 2 from Pleasants Energy. From the south, head north on US 77, take exit 179, then turn right onto Emerson Avenue exit (WV 2N). Travel ~ 6.5 miles. Facility entrance will be on the left. After turning left, travel ~800 feet, stay right at the Y and park. Enter through doors near flag pole and sign.</u></p>		
12.B. New site address (if applicable): <u>(No Change)</u>	12C. Nearest city or town: <u>Waverly</u>	12D. County: <u>Pleasants</u>
12.E. UTM Northing (KM): <u>4354.2051</u>	12F. UTM Easting (KM): <u>468.5443</u>	12G. UTM Zone: <u>17</u>
13. Briefly describe the proposed change(s) at the facility: <u>Add equipment: 1) a router/milling machine, 2) a corner fold machine, and 3) an orbital wrapper/packing machine. The router/milling machine will be served by a dust collector to capture foam particles produced by the routing/milling operation.</u>		
14A. Provide the date of anticipated installation or change: <u>12/15</u> – 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: <u>2/16</u>	
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 <u>24</u> Days Per Week <u>7</u> Weeks Per Year <u>52</u>		
16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> YES <input checked="" type="checkbox"/> 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 (<i>if known</i>). 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 (<i>if known</i>). Provide this information as Attachment D .		
<i>Section II. Additional attachments and supporting documents.</i>		
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).		
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>		
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:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	

General Emission Unit, specify: Router/Milling Machine

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

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

<input type="checkbox"/> Absorption Systems	<input checked="" type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System

Other Collectors, specify

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:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> 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 David Robinson DATE: 12/11/15
(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: David Robinson 35C. Title: Plant Manager

35D. E-mail: David.Robinson@simexinc.com 36E. Phone: (304)665-1104 36F. FAX:

36A. Printed name of contact person (if different from above): David Robinson 36B. Title: Plant Manager

36C. E-mail: David.Robinson@simexinc.com 36D. Phone: (304)665-1104 Ext. 4832 36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
SIMEX INC
181 PLEASANTS INDUSTRIAL PARK
SAINT MARYS, WV 26170-8011

BUSINESS REGISTRATION ACCOUNT NUMBER: **1033-6094**

This certificate is issued on: **07/7/2011**

*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.

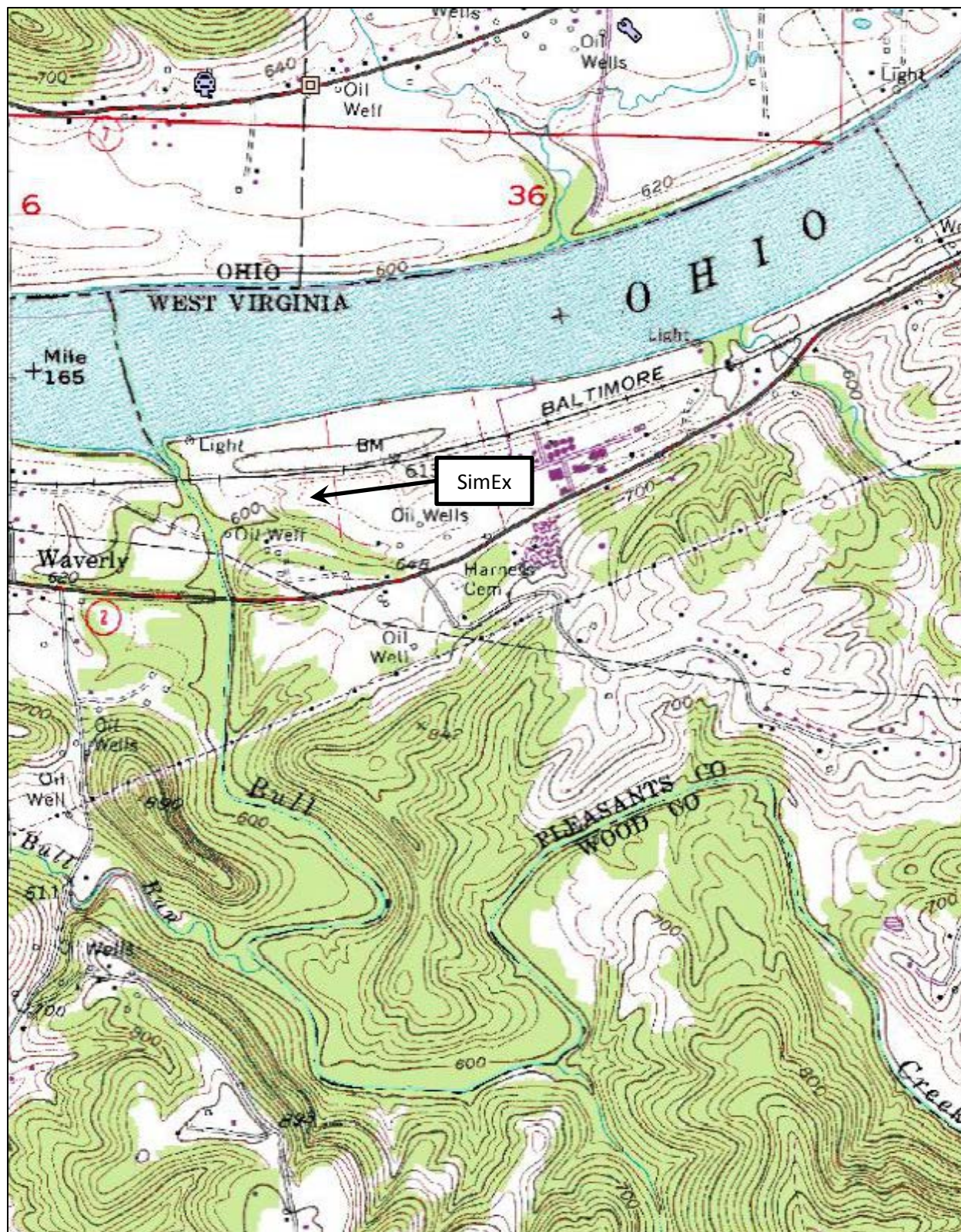
This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

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.**

Attachment B

Location Map



USGS 7.5" Quad Willow Island, WV-Ohio		SimEx Inc. St Marys, West Virginia		
Date: 12-2015	Drawn By: ST	File: N/A	Layout: N/A	Attachment B

Attachment C Schedule of Installation

The new equipment additions (router/milling machine & dust collector, corner fold machine, and an orbital wrapper/packing machine) are estimated to be installed in December of 2015. It is noted that West Virginia DEP issued a Permit Determination Request for this equipment, dated November 12, 2015, indicating a permit is not required. However, WVDEP recommended the permit be updated via a Class II Administrative Update to include references to the new equipment, which is the subject of this submittal.

Attachment D
Regulatory Discussion

Regulatory Introduction

Potential regulatory requirements are grouped into these categories:

- Prevention of Significant Deterioration (PSD)/New Source Review(NSR);
- Title V of the 1990 Clean Air Act Amendments (CAAA);
- WV State Air Permitting Requirements;
- New Source Performance Standards; and
- National Emission Standards for Hazardous Air Pollutants & Maximum Achievable Control Technology.

This application section provides a brief overview of and summarizes the applicability/non-applicability of each as appropriate.

PSD/NSR

The federal NSR program comprises two elements. For major sources of emissions located in an area classified as “attainment” or “unclassifiable” for a particular criteria pollutant, the Prevention of Significant Deterioration (PSD) program potentially applies to new construction or modifications. For major sources of emissions located in an area classified as “nonattainment” or a particular criteria pollutant, the nonattainment NSR program potentially applies in the same manner.

The SimEx Waverly facility is located in Pleasants County, an area designated as attainment for all pollutants except for PM_{2.5}. The Grants Tax District in Pleasants County, which the SimEx facility is located in, is nonattainment for PM_{2.5}. Therefore, the PSD major threshold for criteria pollutants is 250 tpy for all pollutants except PM_{2.5} as the facility is not one of the 28 listed categories in 40 CFR 52.21(b)(1)(i)(a).

For PM_{2.5}, under nonattainment New Source Review (NSR), the major source level is 100 tpy.

The facility is not a major source for any pollutant. As shown in Table D-1 in the previous section, facility emissions are below major source thresholds for all pollutants. Therefore, NSR or PSD program is not triggered.

Table D-1: Summary of Post-Project Facility Potential to Emit

Pollutant	Post-Project (tpy)	NSR/PSD Major Source Threshold ¹ (tpy)	Title V Major Source Threshold (tpy)
NO _x	negligible	250	100
PM10	9.6	250	100
PM2.5	9.6	100	100
CO	negligible	250	100
SO2	negligible	250	100
VOC	45.6	250	100
Max Single HAP	8.6	10	10
Max Total HAPs	9.3	25	25
GHGs (CO2e)	negligible	100,000	100,000

Title V

WV DEP Rule 45 CSR 30 requires that any major source, as defined in 40 CFR 70.2, obtain a Part 70 (Title V) operating permit. As defined in this rule, major source thresholds for criteria pollutants are the lower of 1) applicable nonattainment area NSR threshold level, or 2) 100 tpy. A major source is also defined as one with 10 tpy or more of any single hazardous air pollutant (HAP), or 25 tpy or more of all HAPs combined.

As shown in Table D-1, the SimEx facility is not a Title V major source for any pollutant. Therefore, Title V requirements do not apply.

WV State Requirements

WV 45 CSR30 - Permit Applicability

Pursuant to a November 12, 2015 letter, WVDEP indicated the proposed equipment was exempt from permit requirements, but recommended a Class II Administrative Permit Application be submitted to incorporate the new equipment into the current permit. This application satisfies this recommendation.

WV 45 CSR 7 - To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations

This rule limits visible emissions to less than 20% opacity. This rule also limits particulate emissions from manufacturing processes based on the quantity of

¹ For all criteria pollutants except PM2.5, NSR/PSD major source thresholds are 250 tpy because the area is in attainment for pollutants and the facility is not one of the 28 listed source categories in 40 CFR 52.21(b)(1)(i)(a). For PM2.5 since the area is in nonattainment for PM2.5, the NSR major source level is 100 tpy.

material throughput. Since the window manufacturing process at the SimEx facility does not include significant particulate generating operations, compliance with this rule is expected. The allowable emission levels in this rule are several orders of magnitude higher than the actual emission rates at the SimEx facility. Based on a maximum throughput of 166 lb/hr for the new router/milling machine, the allowable emission rate under 45CSR7 is ~0.013 lb PM/hr. As shown in the Emission Calculations section, the potential to emit for the new router/milling machine served by dust collector is 0.0003 lb PM/hr. Therefore, continued compliance with this rule is expected.

WV 45 CSR 21 - Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds

The SimEx Waverly facility is not subject to any of the source specific categories in this rule and potentially is subject only to the general category in Section 40 of this rule. However, as the facility has an uncontrolled Potential to Emit of much less than 100 TPY of VOC Section 40 also does not apply. Therefore, there are no applicable requirements of this rule.

WV 45 CSR 27 – To Prevent and Control the Emissions of Toxic Air Pollutants

The SimEx facility is not subject to 45 CSR 27 as it is not a Chemical Processing Facility. Further, the facility does not emit any of the toxic air pollutants listed in Table A of 45CSR27. Therefore, no further requirements apply.

NSPS

None of the NSPS in 40 CFR 60 are applicable to the SimEx facility.

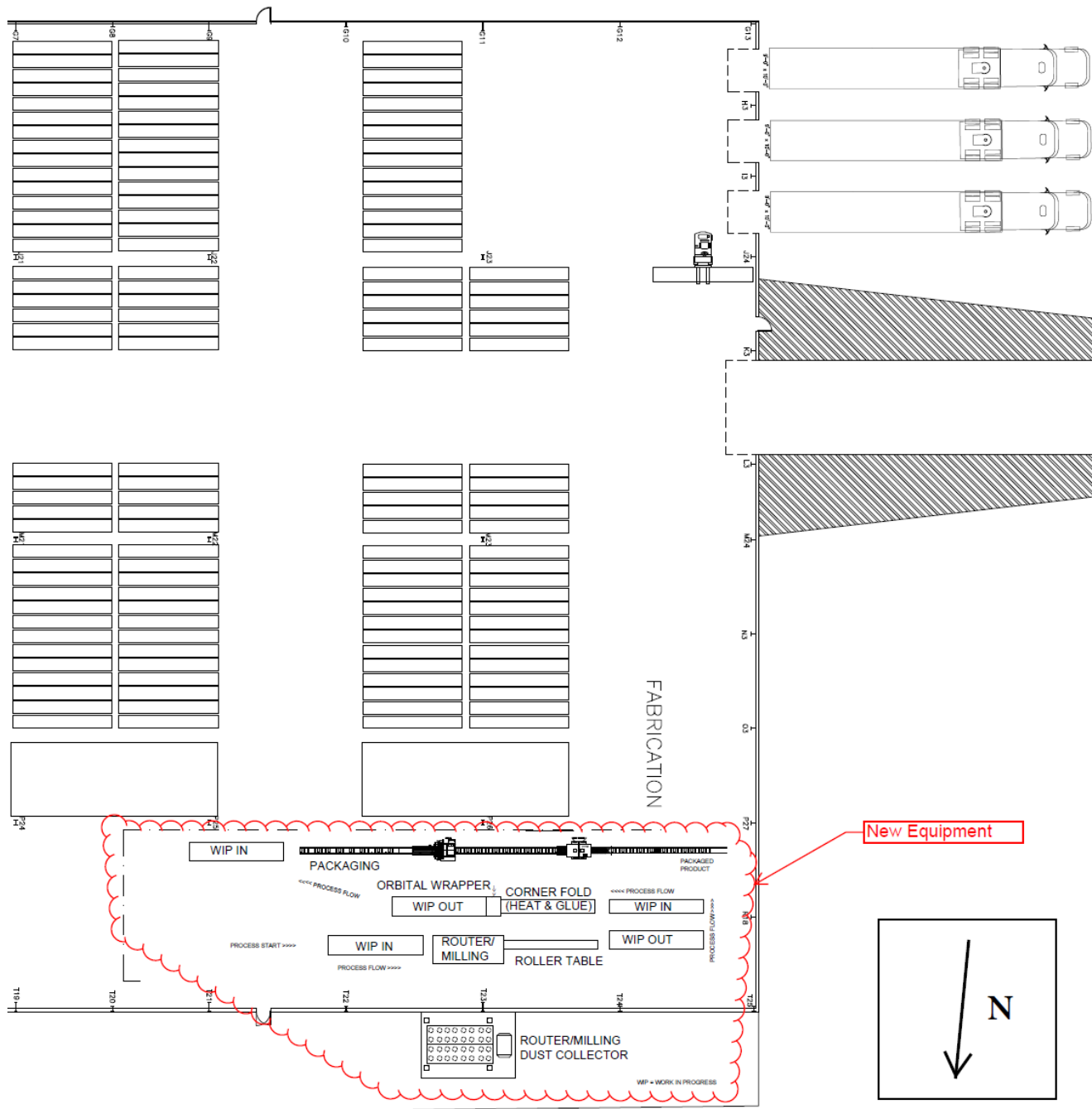
NESHAPS/MACTS

None of the NESHAPS or MACTS in 40 CFR Part 61 or Part 63 are applicable to the SimEx facility.

It is specifically noted that 40 CFR 63 Subpart DDDDDD, Polyvinyl Chloride and Copolymers Production Area Sources, does not apply to the SimEx facility as polymerization is not being performed at the facility (only extrusion of polyvinyl chloride is performed.)

In summary, compliance with applicable rules is expected.

Attachment E Facility Diagram



Attachment G
Process Description

Trim board is extruded on our two foam extruders identified as Emission Units EX-31 and EX-32 in our current permit. Approximately ten percent (10%) of this trim board may be subjected to an additional process of creating “corners”. Foam board corners are an “L” shape seamless design that is used at 90° angles on a house exterior that is being retrofitted with siding. There are three pieces of equipment associated with the corner manufacturing process: 1) a router/milling machine, 2) a corner fold machine, and 3) an orbital wrapper. The following describes the process occurring at each machine:

1. Router/Milling Machine

The full width of a foam board is placed on the entry conveyor. As the foam board enters the machine, a “V” notch is routed/milled lengthwise in the center of the board. The machine is fully enclosed with negative pressure exhaust dust capturing all particulate matter and carrying it to the dust collector, which is located outside. The milled foam board is then placed on the corner fold machine feed table.

Maximum potential uncontrolled Particulate Matter emissions are calculated at 0.03 lb/hr and 0.013 tpy.

2. Corner Fold Machine

The two part adhesive is applied to the “V” notch by using a hand-held applicator. (The applicator is connected by hoses to closed containers of the adhesive components. The components mix at the applicator tip as material is dispensed.) The foam board is then folding at the “V” notch to create the corner. The corner is subsequently heated with an electric radiant heater to approximately 250°F for a minute or two to allow the glue to soften and disperse in the corner joint. After the heat step, the corner proceeds on a roller table into the orbital wrapper.

Maximum potential Volatile Organic Content (VOC) emissions for the adhesive are calculated at 0.03 lb/hr and 0.11 tpy while the maximum potential Hazardous Air Pollutant (HAP) methyl methacrylate monomer emissions are calculated at 0.36 lb/hr and 1.57 tpy.

3. Orbital Wrapper

The orbital wrapper rotates around the corner applying plastic stretch wrap to hold the corner at the desired 90° right angle while the glue cures. Following this process, the corner is then placed in a staging area for subsequent packaging for shipping and loading into a trailer for transportation to the customer. There are no criteria pollutants associated with this machine or the subsequent packaging.

Attachment H
Material Safety Data Sheets



24-Hour Emergency Phone: INFOTRAC (800) 535-5035

Bond & Fill, LLC

250 Cape Highway • East Taunton, MA 02718
Phone: (508) 822-4615 • Fax: (508) 822-4612
E-mail: info@bondfill.com • Website: www.bondfill.com

MATERIAL SAFETY DATA SHEET

Item Description: Bond&Fill Structural Adhesive / Filler – Fast Cure

Item Part Numbers: 160200, 160600, 400200, 810200, 810225, 810230, 810500

Components: **Bond & Fill Activator** (See Pages 1 – 6)
Bond & Fill Adhesive Resin (See Pages 6 – 13)

Revision Date: **January 1, 2010**

Component #1

I. **Product Name:** Bond & Fill Activator

Chemical Name	CAS#	Mix Proportion (by weight)
Methyl Methacrylate Monomer	82-62-6	60-100%
Trade Secret	n/a	5-10%
3,5-Diethyl-1,2-dihydro-1-phenyl-2-propylpyridine	34562-31-7	1-5%
Non-hazardous Ingredients	n/a	10-30%

II. **Composition / Information on Ingredients:**

III. **Hazard Information**

HMIS Overview	
Health Hazard	2*
Fire Hazard	3
Reactivity	2
Personal Protection	<input checked="" type="checkbox"/>

* - Denotes Chronic Health Effects

Emergency Overview: WARNING! Flammable, Harmful, Skin Sensitizer, Irritant.

Route of Exposure: Eyes, Skin, Inhalation, Ingestion.

Potential Health Effects:

Eyes: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.



24-Hour Emergency Phone: **INFOTRAC (800) 535-5035**

Skin: Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. Item may cause skin sensitization, an allergic reaction, which becomes evident on re-exposure to this material.

Inhalation: Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. Item may cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Chronic Health Effects: Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.

Signs/Symptoms: Overexposure can cause headaches, dizziness, nausea, and vomiting.

Target Organs: Eyes. Skin. Respiratory system. Digestive system. Liver. Kidney. Olfactory Function.

Aggravation of Pre-Existing Conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

IV. First Aid Measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Other First Aid: Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.

V. Fire Fighting Measures

Flammable Properties: Flammable. Fine mists explosive below flash point.

Flash Point: 50°F (10°C)

Flash Point Method: Tag closed cup (TCC)

Auto Ignition Temperature: Not determined.

Lower Flammable/Explosive Limit: 2.1%

Upper Flammable/Explosive Limit: 12.5%

Fire Fighting Instructions: Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

Extinguishing Media: Use carbon dioxide (CO₂) or dry chemical when fighting fires involving this material.

Unsuitable Media: Water may cause frothing.

Protective Equipment: As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

Unusual Fire Hazards: Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization.



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VI. Accidental Release Measures

Spill Cleanup Measures: Absorb spill with inert material (i.e. - dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash-back. Ventilate area. Use proper personal protective equipment as listed in section 8.

Personnel Precautions: Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Environmental Precautions: Avoid runoff into storm sewers, ditches, and waterways.

Other Precautions: Pump or shovel to storage/salvage vessels. Add inhibitor to prevent polymerization.

VII. Handling and Storage

Handling: Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning.

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use.

Special Handling Procedures: Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product. Hazardous liquid or vapor residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.

Hygiene Practices: Wash thoroughly after handling.

VIII. Exposure Control / Personal Protection

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description: Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.

Respiratory Protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective: Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

Exposure Guidelines

Methyl Methacrylate Monomer:

Guideline ACGIH: 50 ppm

Guideline ACGIH: 50 ppm
Sensitizer.: Sen



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TLV-STEL: 100 ppm
TLV-TWA: 50 ppm

Guideline OSHA: 100 ppm
PEL-TWA: 100 ppm

Notes : Only established PEL and TLV values for the ingredients are listed.

IX. Physical and Chemical Properties

Physical State Appearance: Paste.

Odor: Fragrant.

Boiling Point: 213°F (100.5°C)

Melting Point: Not determined.

Specific Gravity: 0.96

Solubility: Not determined.

Vapor Density: 3.5 (air = 1)

Vapor Pressure: 28 mmHg @68°F

Percent Volatile: Not determined.

Evaporation Rate: 3 (butyl acetate = 1)

pH: 4.5-5.5 @ 5 Percent Solution

Molecular Formula: Mixture

Molecular Weight: Mixture

Flash Point: 50°F (10°C)

Flash Point Method: Tag closed cup (TCC)

Auto Ignition Temperature: Not determined.

VOC Content: <50 g/L mixed

Percent Solids by Weight Not determined.

X. Stability and Reactivity

Chemical Stability: Unstable.

Hazardous Polymerization: Polymerization may occur under certain conditions.

Conditions to Avoid: Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Oxygen-free atmospheres or inert gas blanketing. Freezing conditions. Material can soften paint and rubber.

Incompatible Materials: Oxidizing agents (i.e.- peroxides, nitrates), reducing agents, acids, bases, azo-compounds, catalytic metals (i.e.- copper, iron), halogens. Free radical initiators. Oxygen scavengers.

XI. Toxicological Information

Methyl Methacrylate Monomer:

RTECS Number: OZ5075000

Eye: Eye - Rabbit Standard Draize Test.: 150 mg

Skin:

Intraperitoneal. - Guinea pig LD50: 1890 mg/kg [Behavioral – Somnolence (general depressed activity)]

Subcutaneous - Guinea pig LD50: 5954 mg/kg [Behavioral – Somnolence (general depressed activity)]

Oral - Rat LD50: 7872 mg/kg [Behavioral - Muscle weakness Behavioral - Coma Lungs, Thorax, or

Respiration - Respiratory depression]



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Intraperitoneal. - Rat LD50: 1328 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Subcutaneous - Rat LD50: 7088 mg/kg [Behavioral - Somnolence (general depressed activity)]

Oral - Mouse LD50: 3625 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Intraperitoneal. - Mouse LD50: 945 mg/kg [Behavioral - Somnolence (general depressed activity)]

Subcutaneous - Mouse LD50: 5954 mg/kg [Behavioral - Somnolence (general depressed activity)]

Oral - Rabbit LD50: 8700 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Administration onto the skin - Rabbit LD50: >5 gm/kg [Skin and Appendages - Dermatitis, other (After systemic exposure)]

Oral - Guinea pig LD50: 5954 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Gastrointestinal - Changes in structure or function of salivary glands]

Administration onto the skin - Rabbit Open irritation test: 10 gm

Inhalation:

Inhalation. - Rat LC50: 78000 mg/m³/4H [Details of toxic effects not reported other than lethal dose value.]

Inhalation. - Mouse LC50: 18500 mg/m³/2H [Details of toxic effects not reported other than lethal dose value.]

Ingestion:

Oral - Rat LD50: 7872 mg/kg [Behavioral - Muscle weakness Behavioral - Coma Lungs, Thorax, or Respiration - Respiratory depression]

Oral - Mouse LD50: 3625 mg/kg [Details of toxic effects not reported other than lethal dose value.]

XII. Ecological Information

Eco-toxicity: No eco-toxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

XIII. Disposal Considerations

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

RCRA Number: D001

Important Disposal Information: DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal container.

XIV. Transport Considerations

DOT Shipping Name: Adhesives

DOT UN Number: 1133

DOT Hazard Class: 3

DOT Packing Group: II

DOT Exemption: ORM-D Small quantity exemption

International Air Transportation (IATA) Exceptions: Consumer Commodity, class 9, ID 8000, less than 500ml

XV. Regulatory Information

Methyl Methacrylate Monomer:

TSCA Inventory Status: Listed

SARA: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.



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New Jersey: Listed: NJ Hazardous List; Substance Number: 1277

Massachusetts: Listed: Massachusetts Oil and Hazardous List

Pennsylvania: Listed

Canada DSL: Listed

3,5-Diethyl-1,2-dihydro-1-phenyl-2-propylpyridine:

TSCA Inventory Status: Listed

Canada DSL: Listed

Canadian Regulations. WHMIS Hazard Class(es): B2; D2B.

All components of this product are on the Canadian Domestic Substances List.

XV. Additional Information

HMIS Fire Hazard: 3

HMIS Health Hazard: 2*

HMIS Reactivity: 2

HMIS Personal Protection: X

MSDS Revision Date: 01/01/2010

MSDS Author: Bond & Fill. LLC

Disclaimer: This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

Component 2

I. **Product Name:** Bond & Fill Adhesive Resin

II. **Composition / Information on Ingredients:**

Chemical Name	CAS#	Mix Proportion (by weight)
Methacrylic Acid	79-41-4	5-10%
Diisopdecyl phthalate	26761-40-0	5-10%
Methyl Methacrylate Monomer	80-62-6	30-60%
2,6-Di-tertiary-butyl-para-cresol	128-37-0	1-5%
Chlorosulfonated polyethylene	63037-39-8	10-30%
Trade Secret	n/a	10-30%
Titanium dioxide	13463-67-7	10-30%



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III. Hazard Information

HMIS Overview	
Health Hazard	2*
Fire Hazard	3
Reactivity	2
Personal Protection	<input checked="" type="checkbox"/>

* - Denotes Chronic Health Effects

Emergency Overview: WARNING! Flammable, Harmful, Skin Sensitizer, Irritant.

Route of Exposure: Eyes, Skin, Inhalation, Ingestion.

Potential Health Effects:

Eyes: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.

Skin: Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. Item may cause skin sensitization, an allergic reaction, which becomes evident on re-exposure to this material.

Inhalation: Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. Item may cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Chronic Health Effects: Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.

Signs/Symptoms: Overexposure can cause headaches, dizziness, nausea, and vomiting.

Target Organs: Eyes, Skin, Respiratory system, Digestive system, Liver, Kidney, Olfactory Function.

Aggravation of Pre-Existing Conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

IV. First Aid Measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Other First Aid: Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.

V. Fire Fighting Measures

Flammable Properties: Flammable. Fine mists explosive below flash point.



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Flash Point: 50°F (10°C)

Flash Point Method: Tag closed cup (TCC)

Auto Ignition Temperature: 789° F

Lower Flammable/Explosive Limit: 1.7%

Upper Flammable/Explosive Limit: 12.5%

Fire Fighting Instructions: Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

Extinguishing Media: Use carbon dioxide (CO₂) or dry chemical when fighting fires involving this material.

Unsuitable Media: Water may cause frothing.

Protective Equipment: As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

Unusual Fire Hazards: Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization.

VI. Accidental Release Measures

Spill Cleanup Measures: Absorb spill with inert material (i.e. - dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash-back. Ventilate area. Use proper personal protective equipment as listed in section 8.

Personnel Precautions: Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Environmental Precautions: Avoid runoff into storm sewers, ditches, and waterways.

Other Precautions: Pump or shovel to storage/salvage vessels. Add inhibitor to prevent polymerization.

VII. Handling and Storage

Handling: Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning.

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use.

Special Handling Procedures: Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product. Hazardous liquid or vapor residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.

Hygiene Practices: Wash thoroughly after handling.

VIII. Exposure Control / Personal Protection

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or



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other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description: Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.

Respiratory Protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective: Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

Exposure Guidelines

Methacrylic acid:

Guideline ACGIH: 20 ppm

TLV-TWA: 20 ppm

Methyl Methacrylate Monomer:

Guideline ACGIH: 50 ppm

Sensitizer.: Sen

TLV-STEL: 100 ppm

TLV-TWA: 50 ppm

Guideline OSHA: 100 ppm

PEL-TWA: 100 ppm

2,6-Di-tertiary-butyl-para-cresol:

Guideline ACGIH: 2 mg/m³

TLV-TWA: 2 mg/m³ Inhalable vapor fraction (IVF)

Titanium dioxide:

Guideline ACGIH: 10 mg/m³

TLV-TWA: 10 mg/m³

Notes: Only established PEL and TLV values for the ingredients are listed.

IX. Physical and Chemical Properties

Physical State Appearance: Paste.

Odor: Strong Acrid

Boiling Point: >200°F (93.3°C)

Melting Point: Not determined

Specific Gravity: Not determined

Solubility: Not determined

Vapor Density: 3.5 (air = 1)

Vapor Pressure: 28 mmHg @68°F

Percent Volatile: Not determined

Evaporation Rate: 3 (butyl acetate = 1)

pH: Not determined

Molecular Formula: Mixture

Molecular Weight: Mixture



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Flash Point: 50°F (10°C)

Flash Point Method: Tag closed cup (TCC)

Auto Ignition Temperature: 789°F

VOC Content: <50 g/L mixed

Percent Solids by Weight: Not determined

X. Stability and Reactivity

Chemical Stability: Unstable.

Hazardous Polymerization: Polymerization may occur under certain conditions.

Conditions to Avoid: Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Oxygen-free atmospheres or inert gas blanketing. Freezing conditions. Material can soften paint and rubber.

Incompatible Materials: Oxidizing agents (i.e. - peroxides, nitrates), reducing agents, acids, bases, azo-compounds, catalytic metals (i.e. - copper, iron), halogens. Free radical initiators. Oxygen scavengers.

XI. Toxicological Information

Methacrylic acid:

RTECS Number: OZ2975000

Skin:

Unreported - Rat LD50: 1600 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Mouse LD50: 1250 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Intraperitoneal. - Mouse LD50: 48 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Unreported - Mouse LD50: 1250 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Rabbit LD50: 1200 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Administration onto the skin - Rabbit LD50: 500 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Administration onto the skin - Guinea pig LD50: 1 gm/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Rat LD50: 1060 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Ingestion:

Oral - Mouse LD50: 1250 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Rat LD50: 1060 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Diisodecyl phthalate:

RTECS Number: T11270000

Skin:

Oral - Rat LD50: 64 gm/kg [Details of toxic effects not reported other than lethal dose value.]

Administration onto the skin - Rabbit LD50: >3160 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Ingestion: Oral - Rat LD50: 64 gm/kg [Details of toxic effects not reported other than lethal dose value.]

Methyl Methacrylate Monomer:

RTECS Number: OZ5075000

Eye: Eye - Rabbit Standard Draize Test.: 150 mg

Skin: Intraperitoneal. - Guinea pig LD50: 1890 mg/kg [Behavioral – Somnolence (general depressed activity)]

Subcutaneous - Guinea pig LD50: 5954 mg/kg [Behavioral – Somnolence (general depressed activity)]



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Oral - Rat LD50: 7872 mg/kg [Behavioral - Muscle weakness Behavioral - Coma Lungs, Thorax, or Respiration - Respiratory depression]

Intraperitoneal. - Rat LD50: 1328 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Subcutaneous - Rat LD50: 7088 mg/kg [Behavioral - Somnolence (general depressed activity)]

Oral - Mouse LD50: 3625 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Intraperitoneal. - Mouse LD50: 945 mg/kg [Behavioral - Somnolence (general depressed activity)]

Subcutaneous - Mouse LD50: 5954 mg/kg [Behavioral - Somnolence (general depressed activity)]

Oral - Rabbit LD50: 8700 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Administration onto the skin - Rabbit LD50: >5 gm/kg [Skin and Appendages - Dermatitis, other (After systemic exposure)]

Oral - Guinea pig LD50: 5954 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Gastrointestinal - Changes in structure or function of salivary glands]

Administration onto the skin - Rabbit Open irritation test: 10 gm

Inhalation:

Inhalation. - Rat LC50: 78000 mg/m³/4H [Details of toxic effects not reported other than lethal dose value.]

Inhalation. - Mouse LC50: 18500 mg/m³/2H [Details of toxic effects not reported other than lethal dose value.]

Ingestion: Oral - Rat LD50: 7872 mg/kg [Behavioral - Muscle weakness Behavioral - Coma Lungs, Thorax, or Respiration - Respiratory depression]

Oral - Mouse LD50: 3625 mg/kg [Details of toxic effects not reported other than lethal dose value.]

2,6-Di-tertiary-butyl-para-cresol:

RTECS Number: GO7875000

Eye: Eye - Rabbit Standard Draize Test.: 100 mg/24H

Skin:

Oral - Mouse LD50: 650 mg/kg [Behavioral - Tremor Lungs, Thorax, or Respiration - Chronic pulmonary edema]

Intraperitoneal. - Mouse LD50: 138 mg/kg [Lungs, Thorax, or Respiration - Chronic pulmonary edema Lungs, Thorax, or Respiration - Other changes Blood - Hemorrhage]

Intravenous. - Mouse LD50: 180 mg/kg [Behavioral - Sleep]

Oral - Guinea pig LD50: 10700 mg/kg [Gastrointestinal - Hyper motility, diarrhea Behavioral - Tremor Lungs, Thorax, or Respiration - Respiratory depression]

Oral - Rabbit LD50: 2100 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Intraperitoneal. - Rat LD50: 8 gm/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Mouse LD50: 650 mg/kg [Behavioral - Tremor Behavioral - Ataxia Lungs, Thorax, or Respiration - Other changes]

Intraperitoneal. - Mouse LD50: 138 mg/kg [Lungs, Thorax, or Respiration - Acute pulmonary edema Blood - Hemorrhage]

Oral - Rat LD50: 890 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Mouse LD50: 1040 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Intraperitoneal. - Mouse LD50: 138 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Subcutaneous - Mouse LD50: 650 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Guinea pig LD50: 10700 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Ingestion:

Oral - Mouse LD50: 650 mg/kg [Behavioral - Tremor Lungs, Thorax, or Respiration - Chronic pulmonary edema]

Oral - Mouse LD50: 650 mg/kg [Behavioral - Tremor Behavioral - Ataxia Lungs, Thorax, or Respiration - Other changes]

Oral - Rat LD50: 890 mg/kg [Details of toxic effects not reported other than lethal dose value.]

Oral - Mouse LD50: 1040 mg/kg [Details of toxic effects not reported other than lethal dose value.]



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Titanium dioxide:

RTECS Number: XR2275000

Carcinogenicity: IARC: Group 2B: Possibly carcinogenic to humans.

XII. Ecological Information

Eco-toxicity: No eco-toxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

XIII. Disposal Considerations

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

RCRA Number: D001, D019

Important Disposal Information: DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal container.

XIV. Transport Considerations

DOT Shipping Name: Adhesives

DOT UN Number: 1133

DOT Hazard Class: 3

DOT Packing Group: II

DOT Exemption: ORM-D Small quantity exemption

International Air Transportation (IATA) Exceptions: Consumer Commodity, class 9, ID 8000, less than 500ml

XV. Regulatory Information

Methacrylic acid:

TSCA Inventory Status: Listed

Massachusetts: Listed: Massachusetts Oil and Hazardous List

Pennsylvania: Listed

Canada DSL: Listed

Diisodecyl phthalate:

TSCA Inventory Status: Listed

California PROP 65: Listed: developmental

Canada DSL: Listed

Methyl Methacrylate Monomer:

TSCA Inventory Status: Listed

SARA: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.

New Jersey: Listed: NJ Hazardous List; Substance Number: 1277

Massachusetts: Listed: Massachusetts Oil and Hazardous List

Pennsylvania: Listed

Canada DSL: Listed



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2,6-Di-tertiary-butyl-para-cresol:

TSCA Inventory Status: Listed

Massachusetts: Listed

Pennsylvania: Listed

Canada DSL: Listed

Chlorosulfonated polyethylene:

TSCA Inventory Status: Listed

Canada DSL: Listed

Titanium dioxide:

TSCA Inventory Status: Listed

Massachusetts: Listed

Pennsylvania: Listed

Canada DSL: Listed

Canadian Regulations. WHMIS Hazard Class(es): B2; D2B

All components of this product are on the Canadian Domestic Substances List.

XV. Additional Information

HMIS Fire Hazard: 3

HMIS Health Hazard: 2*

HMIS Reactivity: 2

HMIS Personal Protection: X

MSDS Revision Date: 01/01/2010

MSDS Author: Bond & Fill. LLC

Disclaimer: This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guide for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

**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 ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
RM1	Vertical Dust Collector Stack	RM1	Foam Router/Milling Machine RM1	96C	Dust Collector	N/A	N/A	PM/PM10	0.03	0.13	0.03	0.13	Solid	EE	N/A
GM1	Evaporation Source	GM1	Glue Machine GM1	N/A	N/A	N/A	N/A	VOCs (total) Methyl Methacrylate Monomer (HAP)	0.025 0.36	0.11 1.57	0.025 0.36	0.11 1.57	Gas/Vapor	EE	N/A

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, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. **DO NOT LIST** H₂, H₂O, N₂, O₂, 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/m³) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO₂, use units of ppmv (See 45CSR10).

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data								
Emission Point ID No. <i>(Must match Emission Units Table)</i>	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow ¹ (acfm) <i>at operating conditions</i>	Velocity (fps)	Ground Level <i>(Height above mean sea level)</i>	Stack Height ² <i>(Release height of emissions above ground level)</i>	Northing	Easting
RM1 (96C)	N/A, Dust Collector Exhausts Inside Building	N/A, Dust Collector Exhausts Inside Building	N/A, Dust Collector Exhausts Inside Building	N/A, Dust Collector Exhausts Inside Building	N/A, Dust Collector Exhausts Inside Building	N/A, Dust Collector Exhausts Inside Building	Inside Building	Inside Building
GM1	N/A, Area Evaporation	N/A, Evaporation Inside Building	N/A, Evaporation Inside Building	N/A, Evaporation Inside Building	N/A, Evaporation Inside Building	N/A, Evaporation Inside Building	Inside Building	Inside Building

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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	Does not apply					
Unpaved Haul Roads	Does not apply					
Storage Pile Emissions	Does not apply					
Loading/Unloading Operations	Does not apply					
Wastewater Treatment Evaporation & Operations	Does not apply					
Equipment Leaks	Does not apply					
General Clean-up VOC Emissions	Does not apply					
Other	Does not apply					

¹ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, 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
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*): GM1

<p>1. Name or type and model of proposed affected source:</p> <p>Glue Machine GM1</p>
<p>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.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>Cellular pvc foam, 166 lb/hr</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>Cellular pvc foam, 166 lb/hr</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants.</p> <p>None</p>

* 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:			
N/A			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
N/A			
(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:			
N/A			
(g) Proposed maximum design heat input: N/A × 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:				
@	Ambient	°F and	Standard	psia
a.	NO _x	0	lb/hr	0 grains/ACF
b.	SO ₂	0	lb/hr	0 grains/ACF
c.	CO	0	lb/hr	0 grains/ACF
d.	PM ₁₀	0	lb/hr	0 grains/ACF
e.	Hydrocarbons	0	lb/hr	0 grains/ACF
f.	VOCs	0.025	lb/hr	0 grains/ACF
g.	Pb	0	lb/hr	0 grains/ACF
h.	Specify other(s)			
	Max Single HAP (Methacrylate Monomer)	0.36	lb/hr	0 grains/ACF
	Total HAP (Methacrylate Monomer)	0.36	lb/hr	0 grains/ACF
		0	lb/hr	0 grains/ACF
		0	lb/hr	0 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

None Required

RECORDKEEPING

Annual material throughput

REPORTING

None Required

TESTING

None Required

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

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*): RM1

<p>1. Name or type and model of proposed affected source:</p> <p>Router/Milling Machine RM1</p>
<p>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.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>Cellular pvc foam, 166 lb/hr</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>Cellular pvc foam, 166 lb/hr</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants.</p> <p>None</p>

* 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:			
N/A			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
N/A			
(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:			
N/A			
(g) Proposed maximum design heat input: N/A × 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:

@	Ambient	°F and	Standard	psia
a. NO _x		0 lb/hr	0	grains/ACF
b. SO ₂		0 lb/hr	0	grains/ACF
c. CO		0 lb/hr	0	grains/ACF
d. PM ₁₀		0.03 lb/hr		grains/ACF
e. Hydrocarbons		0 lb/hr	0	grains/ACF
f. VOCs		0 lb/hr	0	grains/ACF
g. Pb		0 lb/hr	0	grains/ACF
h. Specify other(s)		0 lb/hr	0	grains/ACF
		0 lb/hr	0	grains/ACF
		0 lb/hr	0	grains/ACF
		0 lb/hr	0	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
 None Required

RECORDKEEPING
 Annual material throughput

REPORTING
 None Required

TESTING
 None Required

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

22. Type of Pollutant(s) to be collected (if particulate give specific type): cellular pvc dust

23. Is there any SO₃ in the emission stream? No Yes SO₃ content: _____ ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

Pollutant	IN		OUT	
	lb/hr	grains/acf	lb/hr	grains/acf
PM	0.03		0.0003	

25. Complete the table:

Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector		Fraction Efficiency of Collector	
	Weight % for Size Range		Weight % for Size Range	
0 – 2				
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				

26. How is filter monitored for indications of deterioration (e.g., broken bags)?

- Continuous Opacity
- Pressure Drop
- Alarms-Audible to Process Operator
- Visual opacity readings, Frequency:
- Other, specify:

27. Describe any recording device and frequency of log entries: N/A

28. Describe any filter seeding being performed:

N/A

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): none

30. Describe the collection material disposal system:

Collected material is transferred through an airlock and enclosed chute to an enclosed bin

31. Have you included **Baghouse Control Device** in the Emissions Points Data Summary Sheet? Yes

32. 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: Monthly visual emission observations to ensure < 20% opacity	RECORDKEEPING:
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REPORTING:	TESTING:
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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.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99.99% of particles 5 microns and larger.

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

none

Attachment N Emission Calculations

Emission Source Review

The potential sources of air emissions from the proposed process are:

- 1) Particulate matter from the milling of the foam trim boards; and
- 2) VOC and HAP emissions from curing of the glue.

Heat for warming the trim board prior to folding is provided electrically, not by combustion. Therefore, there are no air emissions from the heating step.

The packaging step involves the use of a machine that wraps protective plastic around the foam corner products. There are no air emissions from this step.

Lastly, foam boards that enter this processing operation will be supplied from the current foam extrusion operation. No changes or increase in potential emissions will occur from the foam extrusion operation, raw material receipt and storage operations, or product shipping operations.

Emission calculations are detailed on the following pages.

Emission Calculations for Trim Board Milling

Emission Point - Router/Milling Machine & Dust Collector

Description	Value	Notes/Calculation
Milling Machine Process Rate (lb/hr)	166	Maximum rate of equipment
Milling Machine Process Rate (ton/hr)	0.083	Milling Machine Process Rate (lb/hr) / 2000 lb per ton
Emission Factor (lb/ton)	0.35	Emission factor from AP42, 4th Edition, Table 10.3-1, for Log Sawing, Uncontrolled
Uncontrolled PM Emissions (lb/hr)	0.03	Milling Machine Process Rate (ton/hr) * Emission Factor (lb/ton)
Uncontrolled PM Emissions (lb/day)	0.70	Uncontrolled PM Emissions (lb/hr) * 24 hr per day
Uncontrolled PM Emissions (ton/yr)	0.13	Uncontrolled PM Emissions (lb/hr) / 2000 lb per ton * 8760 hr per year
Uncontrolled PM ₁₀ Emissions (lb/hr)	0.03	Conservatively Assumed PM ₁₀ = 100% PM
Uncontrolled PM ₁₀ Emissions (lb/day)	0.70	Conservatively Assumed PM ₁₀ = 100% PM
Uncontrolled PM ₁₀ Emissions (ton/yr)	0.13	Conservatively Assumed PM ₁₀ = 100% PM
Dust Collector Capture and Control Efficiency	99.0%	Minimum capture and control efficiency for dust collection system
Controlled PM Emissions (lb/hr)	0.00029	Uncontrolled PM Emissions (lb/hr) * (100% - Dust Collector Capture and Control Efficiency)
Controlled PM Emissions (lb/day)	0.00697	Controlled PM Emissions (lb/hr) * 24 hr per day
Controlled PM Emissions (ton/yr)	0.0013	Uncontrolled PM Emissions (ton/yr) * (100% - Dust Collector Capture and Control Efficiency)
Controlled PM ₁₀ Emissions (lb/hr)	0.00029	Conservatively Assumed PM ₁₀ = 100% PM
Controlled PM ₁₀ Emissions (lb/day)	0.00697	Conservatively Assumed PM ₁₀ = 100% PM
Controlled PM ₁₀ Emissions (ton/yr)	0.0013	Conservatively Assumed PM ₁₀ = 100% PM

Emission Calculations for Corner Fold Machine

Emission Point - Glue Curing

Description	Value	Notes/Calculation
Corner Fold Machine Max Process Rate (lb trim board/hr)	166	Assuming 100% of all trim boards milled are processed into corners for PTE. Actual rate is project to be much closer to 10%.
Glue Application Rate (lb glue/lb trim board)	0.003	Based on usage rates for same process at another facility.
Glue VOC Content (lb/gal)	0.42	per MSDS
Glue Specific Gravity	1	Assumed total for Component A + B at 50/50 wt ratio. Component A = 0.96 per MSDS; Component B unavailable.
Glue VOC Content (lb/lb)	0.056	Glue VOC Content (lb/gal) / Glue Specific Gravity / 7.48 lb per gal
Uncontrolled VOC Emissions (lb/hr)	0.025	Corner Fold Machine Max Process Rate (lb trim board/hr) * Glue Application Rate (lb glue/lb trim board) * Glue VOC Content (lb/lb)
Uncontrolled VOC Emissions (lb/day)	0.604	Uncontrolled VOC Emissions (lb/hr) * 24 hr per day
Uncontrolled VOC Emissions (ton/yr)	0.110	Uncontrolled VOC Emissions (lb/hr) / 2000 lb per ton * 8760 hr per year
Max Single HAP Content (%wt)	80%	per MSDS: Methyl Methacrylate Monomer in both Components A and B at 50/50 wt ratio. HAP Content can vary between 45% and 80% by weight for Component Parts A & B total when combined. 80% chosen as worst case for PTE.
Max Total HAP Content (%wt)	80%	per MSDS: Methyl Methacrylate Monomer in both Components A and B at 50/50 wt ratio. HAP Content can vary between 45% and 80% by weight for Component Parts A & B total when combined. 80% chosen as worst case for PTE.
Uncontrolled Single HAP Emissions (lb/hr)	0.36	Corner Fold Machine Process Rate (lb trim board/hr) * Glue Application Rate (lb glue/lb trim board) * Max Single HAP Content (%wt)
Uncontrolled Single HAP Emissions (ton/yr)	1.57	Uncontrolled Single HAP Emissions (lb/hr) / 2000 lb per ton * 8760 hr per year
Uncontrolled Total HAP Emissions (lb/hr)	0.36	Corner Fold Machine Process Rate (lb trim board/hr) * Glue Application Rate (lb glue/lb trim board) * Max Total HAP Content (%wt)
Uncontrolled Total HAP Emissions (ton/yr)	1.57	Uncontrolled Total HAP Emissions (lb/hr) / 2000 lb per ton * 8760 hr per year

Note: None of the 14 WVDEP Toxic Air Pollutants (TAPs) listed in 45CSR27 Table A are present in the glue; therefore, WVDEP TAP emissions are zero for this process

Comparison of Modification Definition Thresholds in 45CSR13-2.17 with Proposed Process PTE

Pollutant	45CSR13-2.17 Modification Threshold	Proposed Process Uncontrolled PTE	45CSR13-2.17 Modification?
VOC	6 lb/hr and 10 tpy	0.03 lb/hr and 0.11 tpy	N
VOC	144 lb/day	0.6 lb/day	N
PM	6 lb/hr and 10 tpy	0.03 lb/hr and 0.13 tpy	N
PM	144 lb/day	0.72 lb/day	N
PM10	6 lb/hr and 10 tpy	0.03 lb/hr and 0.13 tpy	N
PM10	144 lb/day	0.72 lb/day	N
Total HAPs	2 lb/hr	0.36 lb/hr	N
Total HAPs	5 tpy	1.57 tpy	N

Attachment O
Proposed Monitoring, Recordkeeping,
Reporting, and Testing Plan

SimEx proposes to monitor and keep records of annual router/milling machine throughput and conduct monthly visual emission observations to ensure compliance with the information set forth in this permit application. With the exception of the annual certified emissions statement, SimEx proposes no reporting for its facility.