Title V Permit Renewal Application for the Aker Plastics Company, Inc. Reinforced Plastic Composite Bathware Manufacturing Facility in Martinsburg, West Virginia

Permit Numbers
R30-00300026-2007
R13-2006C

Prepared by:

Russell B. Duvall
Plant Manager
Aker Plastics Company, Inc.
Martinsburg Facility
718 Mid Atlantic Parkway
Martinsburg, WV 25401

Submitted to:

Director
West Virginia Department of Environmental Protection
Division of Air Quality
Title V Permitting Section
601 57th Street SE
Charleston, WV 25304

July 18, 2011

TITLE V PERMIT APPLICATION CHECKLIST
FOR ADMINISTRATIVE COMPLETENESS

A complete application is demonstrated when all of the information required below is properly prepared, completed and attached. The items listed below are required information which must be submitted with a Title V permit application. Any submittal will be considered incomplete if the required information is not included.*	
☒	Two signed copies of the application (at least one must contain the original "*Certification*" page signed and dated in blue ink)
☒	Correct number of copies of the application on separate CDs or diskettes, (i.e. at least one disc per copy)
☒	*Table of Contents (needs to be included but not for administrative completeness)
☒	Facility information
☒	Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios
☒	Area map showing plant location
☒	Plot plan showing buildings and process areas
☒	Process flow diagram(s), showing all emission units, control equipment, emission points, and their relationships
☒	Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance
☒	Listing of all active permits and consent orders (if applicable)
☒	Facility-wide emissions summary SEE Attachment J Exhibit D for PTE calculations
☒	Identification of Insignificant Activities
☒	ATTACHMENT D - Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities
☒	ATTACHMENT E - Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the emission unit is not in compliance
☒	ATTACHMENT G - Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D)
☐	ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each control device for which the "Is the device subject to CAM?" question is answered "Yes" on the Air Pollution Control Device Form (ATTACHMENT G) not applicable
☒	General Application Forms signed by a Responsible Official
☐	Confidential Information submitted in accordance with 45CSR31 not applicable

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Introduction and Discussion

The facility and manufacturing operations are nearly unchanged since the last Title V permit renewal application five years ago. Specifically, the following items are unchanged:

- All resin and gelcoat application equipment
- All dust generation equipment
- The Dürr preconcentrator/RTO add-on control system
- The dust collectors
- The facility space heaters
- The supply and exhaust ventilation systems, including all spray rooms and booths
- The list of Title V emission units

The applicable state and federal regulations are also unchanged. The surrounding area is still classified as in attainment for all Criteria air pollutants. The applicable parts of the Composite MACT rule, which was not revised during this period, still apply to the facility. The federal and state regulatory analyses prepared for the last renewal application also still apply to the facility without change.

The following are the only significant changes that occurred during the preceding term of the current permit:

- The current gelcoat materials no longer contain methyl methacrylate (MMA) monomer.
- The current production resin contains a small amount of the styrene monomer substitute called vinyl toluene (VT). This monomer emits at 55% of the styrene emission rate due higher molecular weight and lower vapor pressure.
- A new procedure and new limits were established for operations during replacement of activated charcoal blocks in the Dürr preconcentrator units. This new procedure and associated limits are already incorporated into the current permits.
- Pearl acrylic bathware units are now produced at the facility. This new operation was discussed in an off-permit modification request letter sent to DEP on Jan 7, 2011 letter, which is included as Attachment K. The exterior of a Pearl acrylic unit consists of a thermoplastic acrylic shell instead of a gelcoat layer. The shell is produced on a specialized thermo-forming tool that heats a flat sheet of acrylic plastic to its softening point, and then forms the soft plastic into the final desired shape using a vacuum molding process. A special bonding resin is applied using the same non-atomized resin applicator guns and rolled out with the same manual rollers. The acrylic bonding resin has a different formulation of styrene and vinyl toluene to ensure a strong bond between the acrylic thermoplastic and the thermoset laminate. The vacuum forming process has no measureable emissions, so this forming equipment is exempt from permitting and is not be an emission source. Further, the Pearl production utilizes the existing bathware production lines and process equipment at the facility. Essentially, the Pearl acrylic process merely substitutes a vacuum-formed acrylic shell in place of a gelcoated mold on the existing production lines. We are proposing new material content and usage limits to incorporate the Pearl process and to update the obsolete table values.

Summary of Proposed Permit Modifications, Corrections, & Clarifications

Please note some of these modifications are proposed as alternatives for the same set of conditions condition, and are mutually exclusive in some cases.

R13-2006C 4.1.3. and R30-00300026-2007 3.1.17. – modification of the term "10% negative pressure environment"

A 10% negative pressure environment inside the production building would be equivalent to a wall loading about -1.4 psia or over 200 pounds per square foot! The force from such a high pressure would make it impossible to open inward-opening exterior doors and would collapse the building structure. We understand that this condition initially referred to a net difference of 10% between the rated building supply airflow and exhaust airflow. Airflow and air pressure are related but are not equivalent. We propose that the term "pressure" should be replaced with the correct term "rated airflow" or the phrase "negative pressure environment of greater than 10%," should be removed.

R13-2006C 4.1.5. and R30-00300026-2007 3.1.18. – clarification of the term "maximum content" in Table 4.1.5.

The permit has established facility-wide maximum hourly rates and maximum annual emission limits for styrene, methacrylate, and total VOC in Tables 4.1.4.a. and b. The monomer and VOC content limits and maximum and maximum annual material usage limits in Table 4.1.5 appear to be the historical basis for the established facility-wide emission limits. If so, the monomer content was a maximum average content, and not an absolute maximum value. However, the table simply labels the content as "maximum." We request that the term "maximum" should be replaced with the more precise term "maximum average," to stay consistent with the original purpose of the value. This clarification will not relax the emission limits established for the facility. This is also consistent with the weighted average approach in the Composite MACT Rule, which is actually more stringent. This clarification will avoid trivial violations where a single resin or gelcoat shipment may contain slightly more than the listed monomer limit, but the average monomer content for the material for the rolling 12-month period is well below the limit.

R30-00300026-2007 3.1.18. – correction of content value in Table 4.1.5

In order to be consistent with the corresponding table value in R13-2006C 4.1.5 and the current resin material, the maximum total VOC content in Table 4.1.5 for Polyester Resin should be 37% by weight instead of 36%.

R13-2006C 4.1.5. and R30-00300026-2007 3.1.18. – modification of content and usage values in Table 4.1.5 to incorporate the Pearl spa process and adjust the maximum values to match the existing permitted emission rates.

The discrepancies between the current content and usages limits in Table 4.1.5. and the corresponding maximum allowable emission rates in Table 4.1.4. were discussed in the January 7, 2011 letter to DEP. Three different PTE estimates were included as **Exhibit B-1**, **Exhibit B-2** and **Exhibit C**. These estimates show how the current material content and usage limits are "disconnected" from the associated facility-wide emission limits due to steady changes in the type and mix of materials used at the plant and the new Pearl process.

We prepared a new estimate, enclosed as **Attachment K Exhibit D**, which is similar to **Exhibit C** but incorporates the Pearl process materials. If material content and usage limits are retained in the renewed and revised permits, then we propose the following updated values for Table 4.1.5.:

Material	Maximum Average Contents			Maximum Annual Usages
	Styrene	AMS/VT	Total VOC	
	(% by weight)			(lb/yr)
Production resin	35.0%	2.0%	0.0%	12,900,000
Gelcoat (all colors)	30.0%	0%	0.02%	3,225,000
Tooling resin	46.8%	0%	1.7%	6,000
Tooling gelcoat	36.8%	0%	5.0%	3,000
Pearl bonding resin	34.0%	13.5%	0.0%	589,000
Catalyst	0%	0%	2.0%	840,000
Mold release	0%	0%	99.0%	16,500
Cleaner - UnisolveEX (DBE)	0%	0%	99.6%	140,000
Cleaner - Isopropanol	0%	0%	100.0%	5,000
Pearl PVC glue/primer	0%	0%	75.0%	20,000

These updated values correspond to the existing 92.08 tpy total VOC limit, and result in a drop in the maximum styrene emissions from 91.10 to 85.43 tpy.

R13-2006C 4.1.5. and R30-00300026-2007 4.1.7. – clarification of the combustion byproduct limits (PM/PM_{10}, SO_2, NO_X, CO) in Table 4.1.4.a.

The emission of combustion byproducts from emission point ST1 has two sources:

1. RTO combustion
2. Direct-fired space heaters that provide space heat to the facility

The company has no power over the operation of either source. The RTO unit must be fired during production hours to comply with the average 1,575°F RTO temperature limit specified in

condition 4.1.15. Further, the facility space heaters must be operated during the heating season to keep the building and workers warm. The company has no way to either assess or assure compliance with these limits because it would require shutdown of the control system and/or building heaters. We do not believe this was the intention of this condition.

The last comprehensive stack test performed in 2005 ago did not properly account for the high degree of variability in the actual combustion byproduct emissions from these two sources for several reasons:

1. RTO combustion is a mix of styrene and natural gas that can vary from 100% styrene fuel to 100% natural gas fuel depending on the current production level in the facility. The test only measured RTO combustion at one mixture – presumably 100% styrene. In fact, styrene-lean combustion is a frequent condition in the RTO, which is why so much supplemental natural gas fuel is used at the plant. Styrene combustion most likely has a different ratio of NO_X to CO than pure natural gas combustion. However, it is impractical to test all likely ratios, and impractical to use such data in emission estimates if it were available.
2. The 2005 test did not factor in the contribution of the combustion emissions from the direct-fired space heaters at the facility. Based on past records, these units could consume 40% to 50% of the plant's total natural gas usage, depending on the severity of the heating season and performance of the Dürr system. The burners inside each space heater generate combustion byproduct emissions that are first discharged into the plant building space and then collected and routed to the Dürr control system. Nearly all of these emission pass through the control system and are simply discharged through the RTO stack. The combustion byproducts from these units are usually estimated by the AP-42 factors for small boilers and the associated natural gas usage.
3. The maximum space heater emissions were not directly measured and are impractical to measure due to the small size. The 2005 test could not contrive to operate the facility space heaters at maximum heat output because such a condition would depend upon extraordinary weather conditions that are not predictable. Therefore the 2005 test measurements are not a true measure of the maximum hourly or annual combustion byproduct emissions from the RTO stack.

We propose a different approach for estimating the combustion byproduct emissions in the renewed permit, which will be more accurate and workable and will include the space heater emissions. The annual styrene consumed in the RTO unit will be converted to "equivalent" natural gas usage based upon the relative heating values of styrene and natural gas. Then, the AP-42 factors for small boilers mentioned above will be used to estimate the combustion byproduct emissions for the total fuel usage – both styrene and natural gas. The upcoming comprehensive source test scheduled for late 2011 will confirm or adjust these factors. Finally, the new factors and the peak hourly RTO usage and peak hourly and seasonal space heater gas usages will be used to estimate the correct maximum limits for these combustion byproducts in Table 4.1.4.a. The proposed language will be similar to the current language in condition 4.3.5. of R30-00300026-2007, except that the term "Sulfur Dioxide" will be expanded to include all Criteria Pollutants from combustion.

R13-2006C 4.1.5. and R30-00300026-2007 3.1.18 – removal of these conditions

The permit has established facility-wide maximum hourly rates and maximum annual emission limits for styrene, methacrylate, and total VOC in Tables 4.1.4.a. and b. The monomer and VOC content limits and maximum and maximum annual material usage limits in Table 4.1.5 appear to be the historical basis for these established emission rates. However, this historical basis has changed significantly, and will continue to evolve in the future. The expected ratio between future gelcoat and resin usage has changed with the start of spa unit production, because the spa units do not require gelcoat. The production resin now contains some VT monomer, which has lower relative emissions compared to styrene. Currently, the production gelcoats do not contain MMA. The cleaners and mold releases and catalysts also have different usage ratios.
All of these changes involve how products are made inside the operation and do not result in any exceedance of any permitted emission limits. As is the case at most composite facilities, the historical usage and content limits slowly became obsolete as the process and materials evolved at the plant. Any new usage and content limits will also become obsolete.

The emission compliance record is sufficient to show continuous compliance with the established annual emission limits and the hourly rates were established by the rated design of the units. The Composite MACT rules for HAP monomer content by process and material type are more stringent than the content limits in the current permit. Thus, the usage limits have become redundant and inflexible. In fact, these limits could result in trivial violations that do not affect emission at all. For example, if 1,200 pounds of tooling gelcoat are used in one year to repair aging tooling, then that would be a violation. If more than 600,000 pounds of catalyst is needed to catalyze 12,000,000 pounds of the new resin containing VT (which is likely), then that would be a violation, too. Neither of these examples would affect the maximum emissions from the plants, but each one would result in a violation and trivial permit modification. This is why, as a general practice, the permit should set limits on emissions only and not try to restrict the production process. For these reasons, we request the removal of these conditions.

We are not asking for any increase in allowable emissions. Removal of these “process” limits will not affect compliance with the existing emission limits, but will instead greatly increase the flexibility of the permit to allow future process changes that do not exceed the emissions cap for the facility. Otherwise, future process changes may require numerous permit modifications for trivial changes in material usage or content

R13-2006C 4.1.6. and R30-00300026-2007 3.1.19 – removal of these conditions

Taken literally, this condition limits the concentration content of each material at the plant to no more than 4.5% MMA, 46.8% styrene, 100% VOC. However, this condition has no apparent purpose, since all the materials at the plant must be below these limits anyway in order to meet the specific conditions for each material type. For this reason, we request the removal of these conditions.

R13-2006C and R30-00300026-2007 – review and approval of the assumed zero emission factor for the DBE cleaner

The DBE cleaner (trade name Unisolve EX) consists of a blend of dibasic esters (DBE) that have very low vapor pressures and high molecular weight. Due to the very low vapor pressures, a negligible amount of this cleaner is lost through evaporation. Instead, the spent dirty DBE solvent is collected and shipped offsite for reprocessing or disposal. A zero emission factor has been assumed for emission reporting purposes since adoption of this cleaner, but no formal documentation or approval of this factor has been included in any past permit. We request that DEP formally review and approve this assumed zero emission factor for the DBE-based cleaner.

R13-2006C and R30-00300026-2007 – inclusion of a permit shield for non-applicability of the CAM Rule requirements

The facility meets all of the conditions for the non-applicability of the CAM rule requirements. Since the facility has a control device, we request that the non-applicability of the CAM Rule should be explicated mentioned in the renewed permit and a permit shield extended to the determination to avoid confusion during plant inspections.

R13-2006C and R30-00300026-2007 – DEP review and tentative approval of the new compliance record format

The summary sheets and an example monthly sheet from the new compliance record is enclosed as **Attachment L**. The MS Excel spreadsheet file is included in the CD diskette copies of the application.

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

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
Aker Plastics Company, Inc.

2. Facility Name or Location:
718 Mid Atlantic Parkway
Martinsburg WV, 2041

3. DAQ Plant ID No.:
0 0 3 — 0 0 0 2 6

4. Federal Employer ID No. (FEIN):
3 5 1 1 7 9 1 0 6

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? **02/01/1987**
☒ **Permit Renewal** — What is the expiration date of the existing permit? **01/22/2012**
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☒ **Corporation** ☐ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☒ **Both**

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

_____
_____
_____

8. Number of onsite employees:
400

9. Governmental Code:

☒ **Privately owned and operated; 0**
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. 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.

11. Mailing Address		
Street or P.O. Box: 718 Mid Atlantic Parkway		
City: Martinsburg	**State: WV**	**Zip: 25401-**
Telephone Number: (304) 263-2525	**Fax Number: (304) 263-3178**	

12. Facility Location		
Street: 718 Mid Atlantic Parkway	**City: Martinsburg**	**County: Berkeley**
UTM Easting: 762.31 km	**UTM Northing: 4376.5** km	**Zone:** ☐ 17 or ☒ **18**
Directions: From I-81, take exit 16E, go to stop light make left, make immediate left onto Mid Atlantic Parkway. Plant is located ½ mile on right side of road.		
Portable Source? ☐ Yes ☒ **No**		
Is facility located within a nonattainment area? ☐ Yes ☒ **No**		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☒ **Yes** ☐ No		**If yes, name the affected state(s). MD, VA, PA**
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☒ **No** **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ **No**		**If yes, name the area(s).**

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: Russell B. Duvall		**Title: Plant Manager**
Street or P.O. Box: 718 Mid Atlantic Parkway		
City: Martinsburg	**State: WV**	**Zip: 25401-**
Telephone Number: (304) 263-2525 ex 6057	**Fax Number: (304) 263-3178**	
E-mail address:		
Environmental Contact: Russell B. Duvall		**Title: Plant Manager**
Street or P.O. Box: 718 Mid Atlantic Parkway		
City: Martinsburg	**State: WV**	**Zip: 25401-**
Telephone Number: (304) 263-2525 ex 6057	**Fax Number: (304) 263-3178**	
E-mail address: Russell.Duvall@maax.com		
Application Preparer: Robert A. Haberlein, Ph.D.		**Title: Owner**
Company: Engineering Environmental		
Street or P.O. Box: 2 Fisk Circle		
City: Annapolis	**State: MD**	**Zip: 21401-**
Telephone Number: (410) 268-7367	**Fax Number: (410) 267-8174**	
E-mail address: robhab@erols.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Reinforced plastic composite (fiberglass) bathware manufacturing	**Bathtubs, spas, and shower enclosures**	**326191**	**3088**

Provide a general description of operations.

The facility uses open molding processes to manufacture reinforced plastic composite bathware parts as follows:

GELCOAT PARTS

Step 1 – a bathware mold is cleaned, repaired, and waxed and transported to one of the two production lines

Step 2 – a thin layer of gelcoat is applied with an gun to the waxed mold, and the gel coat is allowed to cure

Step 3 – layers of glass and resin are applied with a gun to the gelcoated mold and rolled out by hand, then cure

Step 4 – the cured gelcoat part is pulled from the mold – the mold is returned to the cycle at step 1

Step 5 – the pulled gelcoat part is cut and ground to size, and repaired if needed

ACRYLIC PARTS

Step 1 – an acrylic plastic sheet is thermo-formed into a shell and transported to one of the two production lines

Step 2 – a special bonding resin is applied to the acrylic shell with a gun

Step 3 – layers of glass and resin are applied with a gun to the shell and rolled out by hand, then allowed to cure

Step 4 – the cured acrylic part is cut and ground to size and holes are drilled as needed

Step 5 – a system of PVC piping is assembled in place using PVC primer and glue

All process VOC/HAP emissions are collected and delivered to a preconcentrator/RTO control system

Composite grind dust is collected by a vacuum system and delivered to two dust collectors

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☒ **Minor source NSR (45CSR13)**	☐ PSD (45CSR14)
☒ **NESHAP (45CSR15)**	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS	☒ **Section 112(d) MACT standards**
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	

19. Non Applicability Determinations
List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies. **The CAM Rule (40 CFR 64) is not applicable to this source because the operations/emissions are not specifically listed as applicable sources, and the control device is not required to meet a standard.** **The Plastic Part Coating MACT Rule (40 CFR 63 PPPP) is not applicable to this source because the coatings and adhesive used at the plant do not contain any HAP.**
☐ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

☐ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

SEE Attachment I, Section 1

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE Attachment I, Section 1

Are you in compliance with all facility-wide applicable requirements? ☒ **Yes** ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**. - NOT APPLICABLE

20. Facility-Wide Applicable Requirements *(Continued)* - *Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

SEE Attachment I, Section 1

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/ reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE Attachment I, Section 1

Are you in compliance with all facility-wide applicable requirements? ☐ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.- NOT APPLICABLE

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-2006C	**4/10/2007**	
R30-00300026-2007	**1/22/2007**	
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22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	**43.84 (pending test)**
Nitrogen Oxides (NO_X)	**10.82 (pending test)**
Lead (Pb)	**0**
Particulate Matter ($PM_{2.5}$)[1]	**0.66**
Particulate Matter (PM_{10})[1]	**0.66**
Total Particulate Matter (TSP)	**0.66**
Sulfur Dioxide (SO_2)	**0.11**
Volatile Organic Compounds (VOC)	**92.01**
Hazardous Air Pollutants[2]	Potential Emissions
Styrene	**91.10**
Methyl Methacrylate	**9.11**
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1] *$PM_{2.5}$ and PM_{10} are components of TSP.*
[2] *For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.*

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☐	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☐	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☐	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☐	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☒	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☐	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☒	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: **Acrylic sheet thermoforming oven and fixture – zero emissions** _____ **DBE-based cleaners – zero emissions assumed - <1 lb VOC/hr and <10,000 lb VOC/yr** _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)		
☒	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: **Acrylic sheet thermoforming oven and fixture – zero HAP emissions** **DBE-based cleaners – zero HAP emissions**
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☐	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☐	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☐	26.	Fire suppression systems.
☐	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☐	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☐	33.	Hydraulic and hydrostatic testing equipment.
☐	34.	Indoor or outdoor kerosene heaters.
☐	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☒	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)

24. Insignificant Activities (Check all that apply)		
☐	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☐	43.	Process water filtration systems and demineralizers.
☒	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☒	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☐	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☒	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☐	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☐	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☐	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**. **- NOT APPLICABLE**
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**. **- NOT APPLICABLE**

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. 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.

Responsible official (type or print)	
Name: **Russell B. Duvall**	Title: **Plant Manager**

Responsible official's signature:

Signature: _____ Signature Date: _____

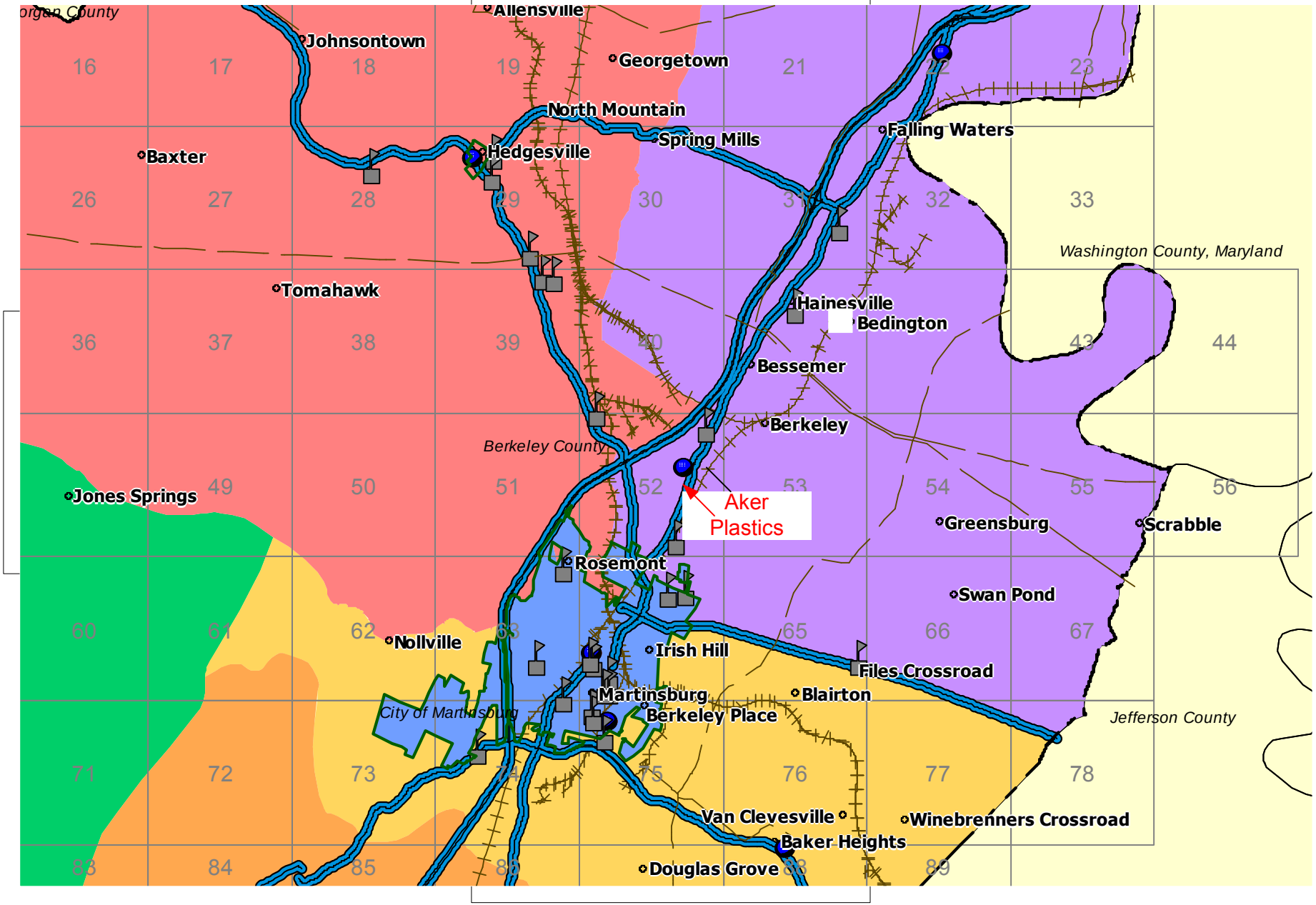
(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:	
☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s) Not Applicable
☒	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s) Not Applicable

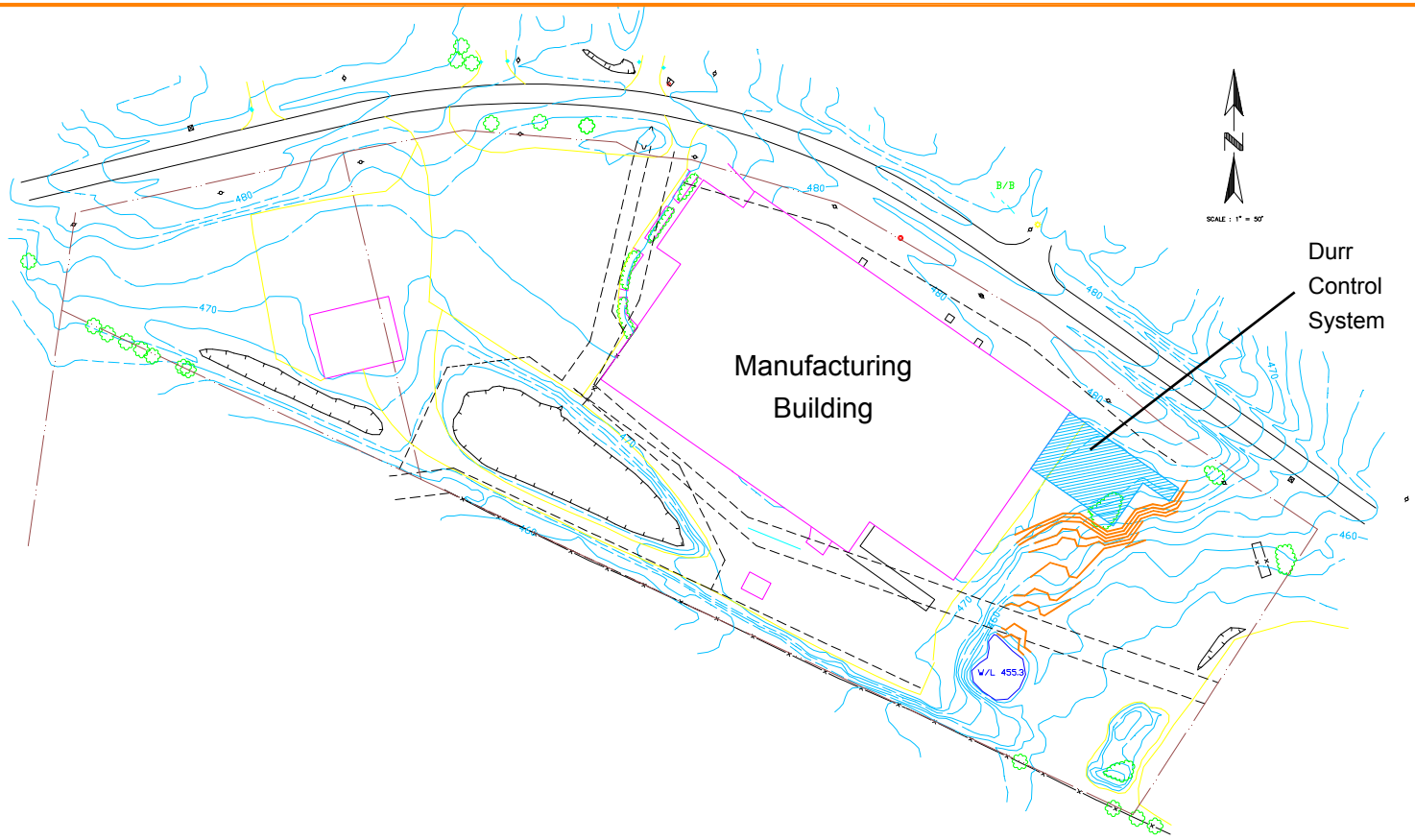
All of the required forms and additional information can be found and downloaded from, the DEP website at http://www.wvdep.org/**www.dep.wv.gov/daq**, ***requested by phone (304) 926-0475, and/or obtained through the mail.***

Attachments

Attachment A Area Map for Aker Plastics Company Inc.



Attachment B - Plan View of the MAAX Martinsburg Site



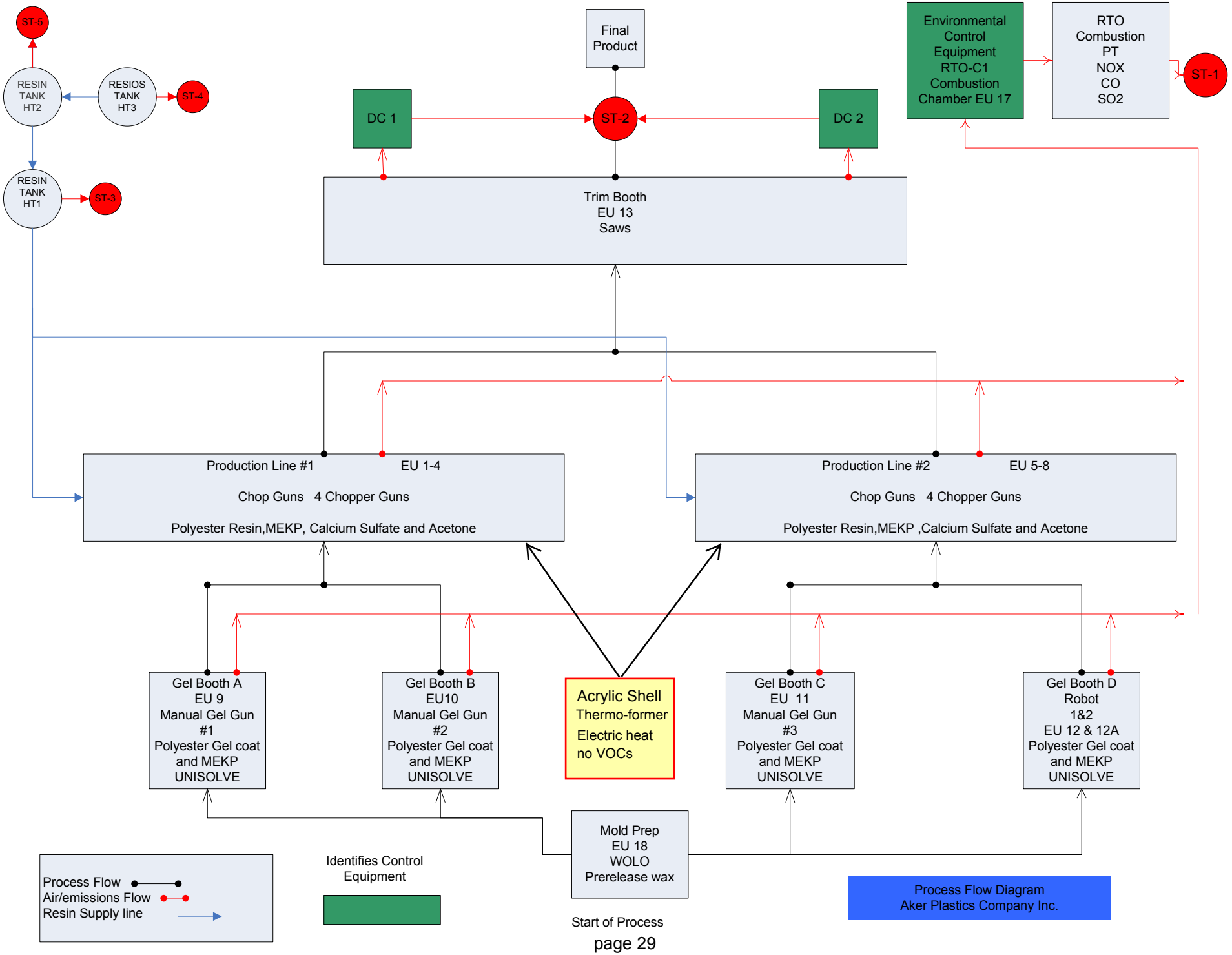
SEE Attachment K Exhibit A for a detailed plan view of the Manufacturing Building which includes all production areas and emission points

ROBERT T. ECKELS
ARCHITECT
599 ROCK CLIFF DR
MARTINSBURG, WV
25401
(304) 267-7595

AKER
PLASTICS

PROJECT NO.:
DRAWN BY: R. ADAMS
SCALE: 1" = 60'
DATE:
REVISIONS:
SHEET NO.

Attachment C - Process Flow Diagram for MAAX Martinsburg



ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
ST-1	**RTO-C1**	**EU-1**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-2**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-3**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-4**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-5**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-6**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-7**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-8**	**Chop Gun**	**230 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-9**	**Gel Gun**	**92 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-10**	**Gel Gun**	**92 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-11**	**Gel Gun**	**92 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-12**	**Gel Gun Robot**	**92 lbs/hr**	**1987**
ST-1	**RTO-C1**	**EU-12A**	**Gel Gun Robot**	**92 lbs/hr**	**1987**
ST-2	**DC-1**	**EU-13**	**Trim Saws**	**6.24 lbs/hr**	**1987**
ST-2	**DC-2**	**EU-13**	**Trim Saws**	**6.24 lbs/hr**	**2001**
ST-3	**N/A**	**EU-14**	**Holding Tanks**	**.007 lbs/hr**	**1987**
ST-4	**N/A**	**EU-15**	**Holding Tanks**	**.007 lbs/hr**	**1987**
ST-5	**N/A**	**EU-16**	**Holding Tanks**	**.007 lbs/hr**	**1987**
ST-1	**N/A**	**EU-17**	**RTO Combustion (burners only)**	**8MM btu/hr**	**1997**
ST-1	**RTO-C1**	**EU-18**	**Wax Application**	**1 lbs/hr**	**2005**

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU-1,2,3,4,5,6,7,8	**Chop Gun**	**RTO-C1**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

This emission unit is a Magnum TRT -1000-F internal mix chop gun that spray up to 18 lbs/min of polyester resin and MEKP as a catalyst.

Manufacturer:	**Model number:**	**Serial number:**
Magnum	**TRT-1000-F**	**N/A**
Construction date:	**Installation date:**	**Modification date(s):**
02/1987	**02/1987**	**N/A**

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

EACH UNIT 230 lbs/hr or 2,015,000 lbs/yr of polyester resin 4.61 lbs/hr or 30,000 lbs/yr MEKP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
230 lbs resin per EU **4.61 lbs MEKP per EU**	**13,495,000 lb resin** **(total all units)**	**8760 hr/yr (normal operations)** **6500 hr/hr (repair scenario)**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes **_X_ No**	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	**0.27**	**1.20**
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Styrene (total for all units)	**74**	**249**
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Unified Emission Factors (UEF) – referenced in current AP-42 for Open Molding Processes

SEE Attachment K Exhibit D for the PTE calculations

SEE Attachment L and enclosed Excel spreadsheet for specific factors equations and calculations

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE Attachment I Section 1 for a listing of applicable requirements

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE Attachment I Section 1 for a listing of applicable requirements

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU-9,10,11,12,12A	**Gel Gun**	**RTO-C1**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

This emission unit is a Magnum ATG-3500-FIT-INT external mix gel gun that spray up to 5 lbs/min of polyester gel coat and MEKP as a catalyst..

Manufacturer:	**Model number:**	**Serial number:**
Magnum	**ATG-3500-FIT-INT**	**N/A**

Construction date:	**Installation date:**	**Modification date(s):**
02/1987	**02/1987**	**N/A**

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

EACH UNIT 92 lbs/hr or 3,000,000 lbs/yr of polyester gel coat 1.84 lbs/hr or 12,000 lbs/yr MEKP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
92 lbs gel coat per EU **1.84 lbs MEKP per EU**	**3,2258,000 total all units**	**8760 hr/yr (normal operations)** **6500 hr/hr (repair scenario)**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes **X** **No**	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	**0.274**	**1.20**
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Styrene (total all units)	**82**	**240**
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Unified Emission Factors (UEF) – referenced in current AP-42 for Open Molding Processes

SEE Attachment K Exhibit D for the PTE calculations

SEE Attachment L and enclosed Excel spreadsheet for specific factors equations and calculations

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE Attachment I Section 2 for a listing of applicable requirements

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE Attachment I Section 2 for a listing of applicable requirements

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU 14,15,16	**Holding Tanks**	**N/A – vented to atmosphere**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Three emission units – each unit is a Holding Tanks used to store polyester resin. Each tanks holds 5,000 gal. or approximately 40,000-42,000 lbs. of material

Manufacturer:	**Model number:**	**Serial number:**
N/A	**N/A**	**N/A**
Construction date:	**Installation date:**	**Modification date(s):**
02/1987	**02/1987**	**N/A**

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

5,000 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
456.6 lbs per tank	**4,500,000 lbs per tank**	**8760 hr/yr (normal operations)** **6500 hr/hr (repair scenario)**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes **X** **No**	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Styrene (total all tanks)	**0.007**	**0.03**
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

TANKS (EPA Program)

original result factored by 4.5 / 4.0

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	Emission unit name:	List any control devices associated with this emission unit:
EU-17	**RTO Combustion Chamber**	**N/A**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

This EU is the combustion chamber in the RTO unit in the Dürr pollution control device.

Manufacturer:	Model number:	Serial number:
Dürr Environmental	**Custom RTO**	**N/A**

Construction date:	Installation date:	Modification date(s):
12/1997	**12/1997**	**N/A**

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

EACH BURNER - two at 4MM Btu/hr

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
8 MM Btu	**To be determined after next source test**	**8760 hr/yr (normal operations)** **6500 hr/hr (repair scenario)**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel?	If yes, is it?
X Yes ___ No	___ Indirect Fired **X** Direct Fired

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
To be determined during next test in later 2011	**two 4 MM = 8 MM Btu**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary fuel is dilute styrene vapor in air from the four preconcentrators
Ssupplemental fuel is natural gas used in the RTO burners when there is insufficient styrene to fire the RTO.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Dilute styrene in air	**0%**	**0%**	**varies w/ppm**
Natural gas	**0%**	**0%**	**1,000 nom**

Emissions Data		
Criteria Pollutants	Potential Emissions – **original estimates**	
	PPH	TPY
Carbon Monoxide (CO)	**10.01**	**43.85**
Nitrogen Oxides (NO_X)	**2.47**	**10.82**
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	**0.15**	**0.657**
Sulfur Dioxide (SO_2)	**0.0062**	**0.0272**
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Styrene	**93.6**	**202.2**
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

SEE the text discussion - we proposed to convert the styrene fuel to equivalent fuel and use the AP-42 factors for small boilers to incorporate the space heater emissions, the natural gas burner emissions, and the styrene combustion emissions in the RTO unit

The next test will adjust these factors and set the new maximum rated annual combustion emission limits

SEE Attachment L and enclosed Excel spreadsheet for specific factors equations and calculation

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE Attachment I Section 6 for a listing of applicable requirements

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE Attachment I Section 6 for a listing of applicable requirements

Are you in compliance with all applicable requirements for this emission unit? **_X_** Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU-13	**Saws & Grinders**	**DC-1,2**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

several pneumatic Dotco saws/grinders

Manufacturer:	**Model number:**	**Serial number:**
Dotco	**10K4223 (typical)**	**N/A**
Construction date:	**Installation date:**	**Modification date(s):**
02/1987	**02/1987**	**N/A**

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
PM uncontrolled emissions for these units is 6.24 lbs/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Uncontrolled 6.24 lbs/hr **Controlled 0.006 lbs/hr**	**Uncontrolled 27.3 TPY** **Controlled 0.026 TPY**	**8760 hr/yr (normal operations)** **6500 hr/hr (repair scenario)**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes **_X_ No**	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)	**6.24 lbs/hr**	**27.3**	
Particulate Matter (PM_{10})	**6.24 lbs/hr**	**27.3**	
Total Particulate Matter (TSP)	**6.24 lbs/hr**	**27.3**	
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)			
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Engineering estimate by plant staff.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE Attachment I Section 5 for a listing of applicable requirements

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE Attachment I Section 5 for a listing of applicable requirements

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: RTO-C1	**List all emission units associated with this control device.** EU-1, 2, 3, 4, 5, 6, 7, 8, 9, 10 11, 12, 12A, 18	
Manufacturer: Dürr Environmental	**Model number:** Preconcentrator w/ RTO	**Installation date:** 12/1997

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
_X_ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
_X_ Thermal Incinerator	___ Flare	_X_ Other (describe) **Preconcentrator**
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Styrene (normal operation)	**100% per M-204**	**82% minimum**
Total VOC (normal operation)	**100% per M-204**	**82% minimum**
Styrene (repair scenario)	**100% per M-204**	**40% minimum**
Total VOC (repair scenario)	**100% per M-204**	**40% minimum**

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
This hybrid system is a combination of four activated charcoal preconcentrators connected to a small RTO oxidizer. The exhaust from the facility is collected inside spray rooms, spray booths, and the building enclosure, filtered in a 3 micron HEPA filter bank, then delivered to the preconcentrators. The styrene is adsorbed and the clean air exhausted to the atmosphere through a tall stack. A small side stream of hot air (about 10% of the total airflow) desorbs the styrene collected on the charcoal, and this desorbed styrene is delivered to the RTO oxidizer for destruction. The RTO exhaust is also routed to the tall stack.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes **_X_ No**

If Yes, **Complete ATTACHMENT H ----- not required**

If No**, Provide justification. The facility is not a listed source type subject to CAM. The facility was an existing source under the Composites MACT and is grandfathered as exempt from any control requirement. Controls are not needed to meet any other standard.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The monitoring and testing requirements for the Dürr control system are detailed in Sections 4.2 and 4.3 of the current Title V permit (R30-00300026-2007).
See Attachment I Section 5 for specific requirements.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: DC-1,2	**List all emission units associated with this control device.** EU-13	
Manufacturer: Dust Control	**Model number:** S3400	**Installation date:** DC-1 02/1987 || DC-2 2001

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	**_X_ Single Cyclone**
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate, PM, PM10, PM-2.5	**100% per M-204**	**99.89%**

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

The dust collection systems are used for point source capturing of particulate matter coming from saws and grinders in our pull and trim and grind operations. The normal operating pressures for the collector system is between 23-30 Kpa. Both collectors are exhausted through ST-2

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes **_X_ No**

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification. The facility is not a listed source type subject to CAM. No listed pollutants are emitted. Dust controls are not needed to meet any other standard.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

See Attachment I Section 6.

Attachment I – Regulatory Analysis: Applicable Requirements, Testing and Monitoring

Section 1 - Listing of Facility Wide Applicable Requirements

Emission Point ID	Applicable Requirement	Permit Condition	Pollutant/ Parameter	Limit/ Standard	Compliance Demonstration	Condition Number	Compliance Status
Facility-Wide	C.S.R. § 45-6-3.1.	III.B.1.a.i.	Refuse	Open Burning Prohibited	N/A	III.B.1.a.i.	C
Facility-Wide	C.S.R. § 45-6-3.2.a.	III.B.1.a.ii.	Stagnation	Open Burning Prohibited	N/A	III.B.1.a.ii.	C
Facility-Wide	40 C.F.R. §§61.145, 61.148,and 61.150	III.B.1.a.iii.	Asbestos	N/A	N/A	III.B.1.a.iii.	C
Facility-Wide	C.S.R. § 45-30-4.3.h.1.B.	III.B.1.a.iv.	Any Newly Applicable Requirement	Notify and Submit Compliance Schedule	N/A	III.B1.a.iv	C
Facility-Wide	WV Code § 22-5-4(a)(15)	III.B.1.a.v.	Testing	Conduct as required	N/A	III.B.1.a.v.	C
Facility-Wide	C.S.R. § 45-13	Permit #: R13-2006 B.6.e.III.B.1.a. vi.	PM Minimize	Fugitive Emissions	N/A	III.C.6.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.6.d	.III.B.1.a.vii.	Stack	Flow Straightening Devices	N/A	III.B.1.a.vii.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.6.f	.III.B.1.a.viii.	Dust/PM	Dust Minimization	N/A	III.C.7.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.4	III.B.1.a.ix.	Revocation of Permit	Commencement of Construction	N/A	III.B.1.a.ix.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 B.2.	III.B.1.a. x.	VOC	Operation of Control Devices	N/A	III.C.9.	C
Product Manufacturing Building	C.S.R. § 45-13 Permit #: R13-2006 B.9	III.B.1.a. xi.	VOC	Building Pressure	Testing, Recordkeeping & Reporting	III.C.8.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 C.5.	III.B.1.a. xii.	Operations	Suspending Activities	N/A	III.B.1.a. xii.	C
Facility-Wide	.S.R. § 45-13 Permit #: R13- 2006 C.7.	C III.B.1.a. xiii.	Commencement of construction	Notification of Activities	N/A	III.B.1.a. xiii.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 C.10.	III.B.1.a. xiv.	Violations	Permittee Subject to Civil and/or Criminal Penalties	N/A	III.B.1.a. xiv.	C
Product Manufacturing Building	C.S.R. § 45-13 Permit #: R13-2006: B.6.c.	III.B.1.a. xv.	Any Air Pollutant	Visible Emissions	N/A	III.C.10	C
Facility-Wide	.S.R. § 45-13 Permit #: R13-2006: B.4.	III.B.1.a. xvi.	Construction	Construction based upon plans	N/A	III.B.1.a. xvi.	C
Regenerative Thermal Oxidizer	C.S.R. § 45-6-4.5.	III.B.1.a.xv ii.	Particles	Partially burned refuse	N/A	III.B.1.a.xv ii.	C
Regenerative Thermal Oxidizer	C.S.R. § 45-6-4.6.	III.B.1.a.xv iii.	Odors	Design, Operation, and Maintenance	N/A	C.11.	C
Facility-Wide	C.S.R. § 45-4-3.1.	III.B.1.b.i.	Any Air Pollutant	Objectionable Odor Prohibited	N/A	C.11.	C
Facility-Wide	C.S.R. § 45-11- 5.2.	III.B.2.a.i.	Any Regulated Air Pollutant	Submit Standby Plan if Requested	N/A	III.B.2.a.i.	C
Facility-Wide	C.S.R. § 22-5-4(a)(14).	III.B.2.a.ii.	Any Regulated Air Pollutant	Emission Inventory	Testing, Recordkeeping & Reporting	III.B.2.a.ii.	C

Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.a.	III.B.2.a. iii.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.b.	III.B.2.a. iv.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
Gel Coat Gun 1 (EU-9)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Gel Coat Gun 2 (EU-10)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Gel Coat Gun 3 (EU-11)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Gel Coat Gun 4 (EU-12)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Gel Coat Gun 5 (EU-12A)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 1 (EU-1)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 2 (EU-2)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 3 (EU-3)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 4 (EU-4)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 5 (EU-5)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 6 (EU-6)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 7 (EU-7)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 8 (EU-8)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.8 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Trimming Saws	C.S.R. § 45-13 Permit #: R13-2006 A.2	III.B.2.a.v.	PM	12.9 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Resin Tank HT1	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	0.006 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1	C
Resin Tank HT2	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	0.006 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1	C
Resin Tank HT3	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	0.006 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1	C
Cyclone DC-1 (ST-2)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-7-4.1	III.B.2.a.v.	PM	0.014 lbs/hr 0.061 tons/year	Testing, Recordkeeping & Reporting	III.C.2.a., III.C.5.	C

Cyclone DC-2 (ST-2)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-7-4.1	III.B.2.a.v.	PM	0.014 lbs/hr 0.061 tons/year	Testing, Recordkeeping & Reporting	III.C.2.a., III.C.5.	C
Regenerative Thermal Oxidizer (ST-1)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-6-4.1	III.B.2.a.v.	PM	0.15 lbs/hr	Testing, Recordkeeping & Reporting	III.C.3.c. III.C.4.	C
Regenerative Thermal Oxidizer (ST-1)	C.S.R. § 45-13 Permit #: R13- 2006: A.2	III.B.2.a.v	SO2	0.0062 lbs/hr	Testing, Recordkeeping & Reporting	III.C.3.d.	C
Regenerative Thermal Oxidizer (ST-1)	C.S.R. § 45-13 Permit #: R13- 2006: A.2.	III.B.2.a.v.	CO	10.01 lbs/hr	Testing, Recordkeeping & Reporting	III.C.2.c., III.C.3.a, III.C.3.b.	C
Regenerative Thermal Oxidizer (ST-1)	C.S.R. § 45-13 Permit #: R13- 2006: A.2	III.B.2.a.v.	NOx	2.47 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1. III.C.2.d. III.C.3.a. III.C.3.b.2.II I.C.3.d	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.3.	III.B.2.a. vi.	VOC's	12.14 lbs/hr or 53.2 tons/year	Testing, Recordkeeping & Reporting	III.C.2.e., III.C.3.a.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Polyester Gel Coat	3,000,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Polyester Resin	12,000,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Methyl Ethyl Ketone Peroxide	300,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Acetone	60,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Unisolve Water Based Solvent	100,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Gypsum	18,000,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.5.	III.E.2.	Polyester Resin	Vapor Suppression	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.6.	III.E.3.	Polyester Gel Coat	36 weight% Styrene	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.6.	III.E.3.	Polyester Resin	36 weight% Styrene	Testing, Recordkeeping & Reporting	III.C.1.	C

Attachment I – Regulatory Analysis: Applicable Requirements, Testing and Monitoring

Section 2 - Chop Guns Applicable Requirements and Monitoring, Testing and Recordkeeping

Emission Point ID	Applicable Requirement	Permit Condition	Pollutant/ Parameter	Limit/ Standard	Compliance Demonstration	Condition Number	Compliance Status
Facility-Wide	C.S.R. § 22-5- 4(a)(14).	III.B.2.a.ii.	Any Regulated Air Pollutant	Emission Inventory	Testing, Recordkeeping & Reporting	III.B.2.a.ii.	C
Chopper Gun 1 (EU-1)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 2 (EU-2)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 3 (EU-3)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 4 (EU-4)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 5 (EU-5)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 6 (EU-6)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 7 (EU-7)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Chopper Gun 8 (EU-8)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	6.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.3.	III.B.2.a. vi.	VOC's	12.14 lbs/hr or 53.2 tons/year	Testing, Recordkeeping & Reporting	III.C.2.e., III.C.3.a.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Polyester Resin	12,000,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	MEKP	300,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Acetone	60,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Gypsum	18,000,000 lbs/year	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.5.	III.E.2.	Polyester Resin	Vapor Suppression	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.6.	III.E.3.	Polyester Resin	36 weight% Styrene	Testing, Recordkeeping & Reporting	III.C.1.	C

Attachment I – Regulatory Analysis: Applicable Requirements, Testing and Monitoring

Section 3 – Gel Coat Guns Applicable Requirements and Monitoring, Testing and Recordkeeping

Emission Point ID	Applicable Requirement	Permit Condition	Pollutant/ Parameter	Limit/ Standard	Compliance Demonstration	Condition Number	Compliance Status
Facility-Wide	C.S.R. § 22-5- 4(a)(14).	III.B.2.a.ii.	Any Regulated Air Pollutant	Emission Inventory	Testing, Recordkeeping & Reporting	III.B.2.a.ii.	C
Gel Coat Gun 1 (EU-9)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Gel Coat Gun 2 (EU-10)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Gel Coat Gun 3 (EU-11)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Gel Coat Gun 4 (EU-12)	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	18.1 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Polyester Gel Coat	3,000,000 lbs/yr	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Methyl Ethyl Ketone Peroxide	300,000 lbs/yr	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Unisolve Water Based Solvent	100,000 lbs/yr	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.6.	III.E.3.	Polyester Gel Coat	36 weight% Styrene	Testing, Recordkeeping & Reporting	III.C.1.	C

Section 4 - Holding Tanks Applicable Requirements and Monitoring, Testing and Recordkeeping

Emission Point ID	Applicable Requirement	Permit Condition	Pollutant/ Parameter	Limit/ Standard	Compliance Demonstration	Condition Number	Compliance Status
Facility-Wide	C.S.R. § 22-5- 4(a)(14).	III.B.2.a.ii.	Any Regulated Air Pollutant	Emission Inventory	Testing, Recordkeeping & Reporting	III.B.2.a.ii.	C
Resin Tank HT1	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	0.006 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1	C
Resin Tank HT2	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	0.006 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1	C
Resin Tank HT3	C.S.R. § 45-13 Permit #: R13-2006 A.2.	III.B.2.a.v.	VOCs	0.006 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.4.	III.E.1.	Polyester Resin	12,000,000 lbs/yr	Testing, Recordkeeping & Reporting	III.C.1.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.6.	III.E.3.	Polyester Resin	36 weight% Styrene	Testing, Recordkeeping & Reporting	III.C.1.	C

Attachment I – Regulatory Analysis: Applicable Requirements, Testing and Monitoring

Section 5 - Saws & Grinders Applicable Requirements and Monitoring, Testing and Recordkeeping

Emission Point ID	Applicable Requirement	Permit Condition	Pollutant/ Parameter	Limit/ Standard	Compliance Demonstration	Condition Number	Compliance Status
Facility-Wide	WV Code § 22-5-4(a)(15)	III.B.1.a.v.	Testing	Conduct as required	N/A	III.B.1.a.v.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006	B.6.e.III.B.1.a.vi.	PM Minimize	Fugitive Emissions	N/A	III.C.6.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.6.f	.III.B.1.a.viii.	Dust/PM	Dust Minimization	N/A	III.C.7.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 B.2.	III.B.1.a. x.	VOC	Operation of Control Devices	N/A	III.C.9.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 C.10.	III.B.1.a. xiv.	Violations	Permittee Subject to Civil and/or Criminal Penalties	N/A	III.B.1.a. xiv.	C
Product Manufacturing Building	C.S.R. § 45-13 Permit #: R13-2006: B.6.c.	III.B.1.a. xv.	Any Air Pollutant	Visible Emissions	N/A	III.C.10	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.a.	III.B.2.a. iii.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.b.	III.B.2.a. iv.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
Trimming Saws	C.S.R. § 45-13 Permit #: R13-2006 A.2	III.B.2.a.v.	PM	12.9 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Cyclone DC-1 (ST-2)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-7-4.1	III.B.2.a.v.	PM	0.014 lbs/hr 0.061 tons/year	Testing, Recordkeeping & Reporting	III.C.2.a., III.C.5.	C
Cyclone DC-2 (ST-2)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-7-4.1	III.B.2.a.v.	PM	0.014 lbs/hr 0.061 tons/year	Testing, Recordkeeping & Reporting	III.C.2.a., III.C.5.	C

Attachment I – Regulatory Analysis: Applicable Requirements, Testing and Monitoring

Section 6 – Dürr Control System Applicable Requirements and Monitoring, Testing and Recordkeeping

Emission Point ID	Applicable Requirement	Permit Condition	Pollutant/ Parameter	Limit/ Standard	Compliance Demonstration	Condition Number	Status
Facility-Wide	C.S.R. § 45-30-4.3.h.1.B.	III.B.1.a.iv.	Any New Applicable Requirement	Notify and Submit Compliance Schedule	N/A	III.B1.a.iv	C
Facility-Wide	WV Code § 22-5-4(a)(15)	III.B.1.a.v.	Testing	Conduct as required	N/A	III.B.1.a.v.	C
Facility-Wide	C.S.R. § 45-13	Permit #: R13-2006 B.6.e.III.B.1.a.vi.	PM Minimize	Fugitive Emissions	N/A	III.C.6.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.6.d	.III.B.1.a.vii.	Stack	Flow Straightening Devices	N/A	III.B.1.a.vii.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.4	III.B.1.a.ix.	Revocation of Permit	Commencement of Construction	N/A	III.B.1.a.ix.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 B.2.	III.B.1.a. x.	VOC	Operation of Control Devices	N/A	III.C.9.	C
Manufacturing Building	C.S.R. § 45-13 Permit #: R13-2006 B.9	III.B.1.a. xi.	VOC	Building Pressure	Testing, Recordkeeping & Reporting	III.C.8.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 C.5.	III.B.1.a. xii.	Operations	Suspending Activities	N/A	III.B.1.a. xii.	C
Facility-Wide	.S.R. § 45-13 Permit #: R13- 2006 C.7.	C III.B.1.a. xiii.	Commencement of construction	Notification of Activities	N/A	III.B.1.a. xiii.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 C.10.	III.B.1.a. xiv.	Violations	Permittee Subject to Penalties	N/A	III.B.1.a. xiv.	C
Manufacturing Building	C.S.R. § 45-13 Permit #: R13-2006: B.6.c.	III.B.1.a. xv.	Any Air Pollutant	Visible Emissions	N/A	III.C.10	C
Facility-Wide	.S.R. § 45-13 Permit #: R13-2006: B.4.	III.B.1.a. xvi.	Construction	Construction based upon plans	N/A	III.B.1.a. xvi.	C
RTO	C.S.R. § 45-6-4.5.	III.B.1.a.xv ii.	Particles	Partially burned refuse	N/A	III.B.1.a.xv ii.	C
RTO	C.S.R. § 45-6-4.6.	III.B.1.a.xv iii.	Odors	Design, Operation, and Maintenance	N/A	C.11.	C
Facility-Wide	C.S.R. § 45-4-3.1.	III.B.1.b.i.	Any Air Pollutant	Objectionable Odor Prohibited	N/A	C.11.	C
Facility-Wide	C.S.R. § 45-11- 5.2.	III.B.2.a.i.	Any Regulated Air Pollutant	Submit Standby Plan if Requested	N/A	III.B.2.a.i.	C
Facility-Wide	C.S.R. § 22-5- 4(a)(14).	III.B.2.a.ii.	Any Regulated Air Pollutant	Emission Inventory	Testing, Recordkeeping & Reporting	III.B.2.a.ii.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.a.	III.B.2.a. iii.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.b.	III.B.2.a. iv.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
RTO (ST-1)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-6-4.1	III.B.2.a.v.	PM	0.15 lbs/hr	Testing, Recordkeeping & Reporting	III.C.3.c. III.C.4.	C
RTO (ST-1)	C.S.R. § 45-13 Permit #: R13- 2006: A.2	III.B.2.a.v	SO2	0.0062 lbs/hr	Testing, Recordkeeping & Reporting	III.C.3.d.	C
RTO (ST-1)	C.S.R. § 45-13 Permit #: R13- 2006: A.2.	III.B.2.a.v.	CO	10.01 lbs/hr	Testing, Recordkeeping & Reporting	III.C.2.c., III.C.3.a, III.C.3.b.	C
RTO (ST-1)	C.S.R. § 45-13 Permit #: R13- 2006: A.2	III.B.2.a.v.	NOx	2.47 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1. III.C.2.d. III.C.3.a. III.C.3.b.2. III.C.3.d	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 A.3.	III.B.2.a. vi.	VOC's	12.14 lbs/hr or 53.2 tons/year	Testing, Recordkeeping & Reporting	III.C.2.e., III.C.3.a.	C

Attachment I – Regulatory Analysis: Applicable Requirements, Testing and Monitoring

Under the current permits, MAAX has implemented a monitoring plan for the Dürr Control System in which:

a. MAAX personnel will collect a set of five styrene detector tube samples every calendar month:
   - four styrene concentration samples in each outlet from each of the preconcentrator units
   - one styrene concentration sample in the process exhaust duct from plant to the system

b. If the monthly detector tube readings return an average preconcentrator adsorption efficiency of 82% or less, then MAAX will perform a full EPA Method 18 test to confirm the average adsorption efficiency during an entire eight-hour workshift. This test will be performed within 60 days after discovery that the preconcentrator efficiency is below 82%. The performance test shall be conducted at a production rate of at least 80% of plant maximum capacity. The Company shall inform this office in writing of the performance test date/time at least ten days prior to the scheduled time.

c. If the EPA Method 18 test results confirm that the average preconcentrator adsorption efficiency is 82% or less, then MAAX will notify the DAQ and will then complete restoration of the Dürr control system within 180 days after results of Method 18 testing are received. Restoration of the control system consists of the following four actions:
   - Adjust the Dürr control system timing and operating parameters.
   - Replace the air-seal gaskets in the four individual preconcentrator units if needed.
   - Upgrade the thermal mass (ceramic block) in the regenerative thermal oxidizer (RTO) unit if needed.
   - Replace the carbon adsorption media blocks in the four individual preconcentrator units.

A third-party source testing company will measure the styrene concentrations in the preconcentrator inlet and outlet according to EPA Method 18 on an annual basis. A detailed Method 18 test protocol report will be submitted to DAQ for approval 30 days before the annual concentration test. The Company shall inform this office in writing of the performance test date/time at least ten days prior to the scheduled time. If the annual concentration test shows an average adsorption efficiency of 82% or less, MAAX will notify DAQ and then commence restoration of the Dürr control system as described in Section III, Item 4.c.

A third-party source testing company will conduct a comprehensive source test that will measure the overall control efficiency of the Dürr control system every five years to coincide with the renewal of the Title V operating permit. The comprehensive test samples will be collected at four sample locations listed below:

- Preconcentrator Inlet - also the process exhaust outlet from the plant.
- Preconcentrator Outlet - also the stack inlet from the four preconcentrators
- RTO Inlet
- RTO Outlet

A detailed comprehensive test protocol report shall be submitted to the DAQ for approval 30 days before the initial comprehensive source test. The Company shall inform this office in writing of the performance test date/time at least ten days prior to the scheduled time.

. During any EPA Reference Method 25A testing being performed on the Dürr control system, concurrent detector tube testing shall be performed as described in Item 4 and those results submitted with results from the Method 25A testing to the DAQ.

Attachment I – Regulatory Analysis: Applicable Requirements, Testing and Monitoring

Section 7 - Dust Collector Applicable Requirements and Monitoring, Testing and Recordkeeping

Emission Point ID	Applicable Requirement	Permit Condition	Pollutant/ Parameter	Limit/ Standard	Compliance Demonstration	Condition Number	Status
Facility-Wide	WV Code § 22-5-4(a)(15)	III.B.1.a.v.	Testing	Conduct as required	N/A	III.B.1.a.v.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.6.e	.III.B.1.a.vi.	PM Minimize	Fugitive Emissions	N/A	III.C.6.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006 B.6.f	.III.B.1.a.viii.	Dust/PM	Dust Minimization	N/A	III.C.7.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 B.2.	III.B.1.a. x.	VOC	Operation of Control Devices	N/A	III.C.9.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13- 2006 C.10.	III.B.1.a. xiv.	Violations	Permittee Subject to Civil and/or Criminal Penalties	N/A	III.B.1.a. xiv.	C
Manufacturing Building	C.S.R. § 45-13 Permit #: R13-2006: B.6.c.	III.B.1.a. xv.	Any Air Pollutant	Visible Emissions	N/A	III.C.10	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.a.	III.B.2.a. iii.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
Facility-Wide	C.S.R. § 45-13 Permit #: R13-2006: B.6.b.	III.B.2.a. iv.	Smoke and/or PM	Opacity (20%)	Testing, Recordkeeping & Reporting	III.C.4.	C
Trimming Saws	C.S.R. § 45-13 Permit #: R13-2006 A.2	III.B.2.a.v.	PM	12.9 lbs/hr	Testing, Recordkeeping & Reporting	III.C.1.	C
Cyclone DC-1 (ST-2)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-7-4.1	III.B.2.a.v.	PM	0.014 lbs/hr 0.061 tons/year	Testing, Recordkeeping & Reporting	III.C.2.a., III.C.5.	C
Cyclone DC-2 (ST-2)	C.S.R. § 45-13 Permit #: R13-2006: A.2. and C.S.R. § 45-7-4.1	III.B.2.a.v.	PM	0.014 lbs/hr 0.061 tons/year	Testing, Recordkeeping & Reporting	III.C.2.a., III.C.5.	C

MATERIAL SAFETY DATA SHEET

SECTION I - IDENTIFICATION

TRADE NAME: THERMACLEAN 095-0102
DESCRIPTION: UNISOLVE EX
PRODUCT CODE IDENTITY: 0950102KCB
NPCA HMIS RATING: H 1 F 2 R 0 LAST REVISED: 10/07/2008
PRINT DATE: 07/09/2011

COMPANY NAME: CCP COMPOSITES
ADDRESS: 820 E. 14TH AVE. CCP COMPOSITES
PRODUCT STEWARDSHIP
N. KANSAS CITY MO 64116
CUSTOMER: INFORMATION TELEPHONE:
COMPOSITES: 1-800-821-3590
POLYMERS: 1-800-488-5541

ATTENTION:

24 HOUR RESPONSE NUMBER (CHEMTREC): 1-800-424-9300 (NORTH AMERICA)
001-703-527-3887 (INTERNATIONAL)
FOR MEDICAL EMERGENCIES (PROSAR): 1-800-269-9906

CCP certifies that its products comply with all the provisions of the Toxic Substances Control Act (TSCA), unless otherwise stated by ingredient in Section II.

*** The percent by weight composition data given in Sections II and X are NOT SPECIFICATIONS, but are based on 'target' formula values for each ingredient in the product. The data are presented as ranges for low hazard ingredients and single point values for ingredients of regulatory concern. Actual batch concentrations will vary within limits consistent with separately established product specifications. ***

SECTION II INGREDIENTS

1 ALIPHATIC DIESTER
CAS# 000627-93-0
DIMETHYL ADIPATE
PCT BY WT: 12.6650 VAPOR PRESSURE: .200 MMHG @ 68F
EXPOSURE LIMIT:
ACGIH TLV/TWA: NONE ESTABLISHED
OSHA PEL/TWA: NONE ESTABLISHED
LD50, Oral: >8000 mg/kg (rats) | Determined as mixture
LD50, Dermal: >2250 mg/kg (rabbits | with ingredients 2 and
LC50, Inhalation: >11 mg/L (4 hr-rats) | 3 below.
OTHER: Eye Irritant
OTHER (cont.): 1.5 ppm, 10 mg/m3 - REL/TWA (8 hr) as mixture.

2 ALIPHATIC DIESTER
CAS# 001119-40-0
DIMETHYL GLUTARATE
PCT BY WT: 49.1700 VAPOR PRESSURE: .200 MMHG @ 68F
EXPOSURE LIMIT:
ACGIH TLV/TWA: NONE ESTABLISHED
OSHA PEL/TWA: NONE ESTABLISHED
OTHER: Eye Irritant

3 ALIPHATIC DIESTER
CAS# 000106-65-0
DIMETHYL SUCCINATE
PCT BY WT: 12.6650 VAPOR PRESSURE: .200 MMHG @ 68F
EXPOSURE LIMIT:
ACGIH TLV/TWA: NONE ESTABLISHED
OSHA PEL/TWA: NONE ESTABLISHED
LD50, Oral: 8191 mg/kg (RATS)
LD50, Dermal: >2250 mg/kg (RABBITS)

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LC50, Inhalation: >11 mg/kg for 4 hours (RATS)
OTHER: Possible eye,respiratory irritant

4
CAS# 034590-94-8
DIPROPYLENE GLYCOL MONOMETHYL ETHER
PCT BY WT: 25.0000 VAPOR PRESSURE: .450 MMHG @ 68F
EXPOSURE LIMIT:
ACGIH TLV/TWA: 100 PPM (606 MG/CU.M.) (SKIN)
ACGIH TLV/STEL: 150 PPM (909 MG/CU.M.) (SKIN)
OSHA PEL/TWA: 100 PPM (600 MG/CU.M.) (SKIN)
OSHA PEL/STEL: 150 PPM (900 MG/CU.M.) (SKIN)
LD50, Oral: 5200 MG/KG (RAT)
LD50, Dermal: 9500 MG/KG (RABBIT)
LC50, Inhalation: >500 PPM/7 HR (RAT)

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This product contains no reportable carcinogens or suspected carcinogens.

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SECTION III PHYSICAL DATA

Boiling Range: High- -N/A F Low- 369.0 F
Vapor Pressure: See Section II
Theoretical Weight per Gallon, Calculated: 8.8066 LB/GL
Theoretical Specific Gravity, Calculated: 1.058
Theoretical VOC, Calculated: 8.767 LB/GL
--If applicable , see Section X for further VOC information--
Physical State: LIQUID
Appearance: CLEAR
Odor: SWEET FRAGRANCE
Odor Threshold: -N/A
pH: -N/A
Freezing Point: -N/A
Water Solubility: PARTIAL
Coefficient of Water/Oil Distribution: -N/A
Mechanical Impact Explosion: NO KNOWN HAZARD
Static Electricity Explosion: AVOID STATIC CHARGE

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CHARACTERISTICS:
Lowest Closed Cup Flashpoint: 190.0 degrees F
Lower Flammable Limit in Air: Lower- 1.1 % by volume
For Flash Points 142 to 200 deg. F.
OSHA Flammability Classification: Class IIIA
DOT Flammability Classification: Combustible Liquid
DOT Shipping Name:
Flash Points 141 to 200 deg. F.
COMBUSTIBLE LIQUID, N.O.S., NA1993, PG III = Bulk/Land

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* THERMACLEAN 095-0102 *
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For technical name or names consult Section II

CHEMICALS, N.O.I. = Non-Bulk/Land
CHEMICALS, N.O.I. = Bulk & Non-Bulk/Air,Sea

Flash Points 141 to 200 deg. F.

COMBUSTIBLE LIQUID, N.O.S., NA1993, PG III = Bulk / Land
(Contains Dipropylene Glycol Monomethyl Ether)
CHEMCIALS, N.O.I. = Non-Bulk / Land
CHEMICALS, N.O.I. = Bulk & Non-Bulk / Air,Sea

EXTINGUISHING MEDIA:

Foam, carbon dioxide, dry chemical, water fog.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Keep containers tightly closed and isolate from heat, electrical equipment, sparks and flame. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

If used or applied in confined areas or tanks, provide adequate ventilation and consider the use of respirators.

SPECIAL FIRE FIGHTING PROCEDURES:

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat.

ADDITIONAL TRANSPORTATION INFORMATION:

Freight Classification:

NMFC: 48580/SUB 3 CLEANING COMPOUNDS, LIQUID, NOI LTL CLASS 55

SECTION V HEALTH HAZARD DATA

EFFECTS OF EXCESSIVE OVEREXPOSURE. PRIMARY ROUTES OF ENTRY ARE:

EYE CONTACT:

Irritation. Symptoms are tearing, redness and discomfort.

SKIN CONTACT:

Irritation. Can cause defatting of skin which may lead to dermatitis.

INHALATION:

Irritation to nose and throat. Extended or repeated exposure to concentrations above the recommended exposure limits may cause brain or nervous system depression, with symptoms such as dizziness, headache or nausea. If continued indefinitely, loss of consciousness, liver and kidney damage may result.

Reports have associated repeated or prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

INGESTION:

May cause mouth, throat, esophagus and stomach irritation, nausea, vomiting and diarrhea.

MEDICAL CONDITIONS THAT MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT:

Preexisting eye, skin, liver, kidney and respiratory disorders.

EMERGENCY AND FIRST AID PROCEDURES:

In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing. Thoroughly clean contaminated shoes. If affected by inhalation of vapors or spray mist remove to fresh air. If swallowed, do not induce vomiting. Get medical attention immediately.

CALIFORNIA PROPOSITION 65 INFORMATION:

This material contains no intentionally-added ingredients, covered by the California "Safe Drinking Water and Toxic Enforcement Act of 1986"

(Proposition 65), unless specifically stated under OTHER HEALTH HAZARDS, by individual chemical.

OTHER HEALTH HAZARDS:

DIPROPYLENE GLYCOL MONOMETHYL ETHER

MAY CAUSE MILD EYE AND SKIN IRRITATION. BREATHING EXCESS VAPORS UNLIKELY UNDER NORMAL WORK CONDITIONS. MAY CAUSE MILD, REVERSIBLE LIVER EFFECTS.

SECTION VI REACTIVITY DATA

STABILITY: Stable HAZARDOUS POLYMERIZATION: None under normal conditions.

CONDITIONS TO AVOID:

Elevated temperatures.

INCOMPATABILITY (MATERIALS TO AVOID):

Strong acids and strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition or combustion can produce fumes containing organic acids, carbon dioxide and carbon monoxide.

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Contain and remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD:

Dispose of in accordance with local, state and federal regulations. Do not incinerate closed containers. Incinerate in approved facility.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Breathing small amounts of this product under normal handling is not likely to cause harmful effects. Respiratory protection is not normally needed if local ventilation is satisfactory. However, avoid prolonged or repeated breathing of vapor or mist. If levels are excessive, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during application and other use of this product until all vapors and mists are exausted. Follow respirator manufacturers directions for respirator use. Observe OSHA standard 29 CFR 1910.134.

VENTILATION:

Provide general clean air dilution or local exhaust ventilation in volume and pattern to keep the air contaminant concentration below the lower explosion limit and below current applicable exposure limits. If exposed to vapors, open windows and doors or use other means to ensure fresh air delivery during application and drying. If you experience eye watering, headaches or dizziness, increase fresh air or wear respiratory equipment (NIOSH/MSHA TC23C or equivalent), or leave the area.

PROTECTIVE GLOVES:

Use solvent impermeable gloves to avoid contact with product.

EYE PROTECTION:

Do not get in eyes. Use safety eyewear with splash guards or side shields, chemical goggles, face shields.

OTHER PROTECTIVE EQUIPMENT:

Avoid contact with skin. Use protective clothing. Prevent contact with contaminated clothing. Wash contaminated clothing, including shoes, before reuse.

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* MATERIAL SAFETY DATA SHEET *
* 0950102KCB *

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SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not store above 120 deg. F. Store large quantities in buildings designed to comply with OSHA 1910.106. Keep away from heat, sparks and flame. Keep containers closed when not in use and upright to prevent leakage. Do not transfer contents to unlabeled bottles or other containers.

OTHER PRECAUTIONS:

Do not take internally. Wash hands after using and before smoking or eating. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks and flames. Do not cut, puncture or weld on or near emptied containers. Follow all hazard precautions given in this data sheet until container is thoroughly cleaned or destroyed. If this product is blended with other components such as thinners, converter, colorants and catalysts prior to use, read all warning labels. Any mixture of components will have hazards of all components. Follow all precautions. If spraying this material, keep spray booths clean. Avoid buildup of spray dust or overspray in booths or ducts.

KEEP OUT OF REACH OF CHILDREN FOR INDUSTRIAL USE ONLY

SECTION X Sara Title III Information

SARA 313 INFORMATION:

This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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CCP COMPOSITES

WARRANTIES, DISCLAIMERS AND LIMITATION OF LIABILITY (REV. 03/09)

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Seller warrants that: (i) Buyer shall obtain good title to the product sold hereunder; (ii) at Shipment such product shall conform to Seller's specifications; and (iii) the sale or use of such product will not infringe the claims of any U.S. patent covering the product itself, but Seller does not warrant against infringement which might arise by the use of said product in any combination with other products or arising in the operation of any process. SELLER MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, EVER IF THAT PURPOSE IS KNOWN TO SELLER. ANY APPLICATION INFORMATION OR ASSISTANCE WHICH SELLER MAY FURNISH TO BUYER IS GRATUITOUS AND SHALL IN NO WAY BE DEEMED PART OF THE SALE OF PRODUCT HEREUNDER OR A WARRANTY OF THE RESULTS OBTAINED THROUGH THE USE OF SUCH PRODUCT.

Without limiting the generality of the foregoing, if any product fails to meet warranties mentioned above, Seller shall at Seller's option either replace the nonconforming product at no cost to Buyer or refund Buyer the purchase price thereof. The foregoing is Buyer's sole and exclusive remedy for failure of Seller to deliver or supply product that meets the foregoing warranties. Seller's liability with respect to this contract and the product purchased under it shall not exceed the purchase price of the portion of such product as to which such liability arises. Seller shall not be liable for any injury, loss, or damage resulting from the handling or use of the product shipped hereunder whether in the manufacturing process or otherwise. In no event shall Seller be liable for special, incidental, or consequential damages including without limitations loss of profits, capital or business opportunity, downtime costs, or claims of customers or employees of Buyer. Failure to give Seller notice of any claim within thirty (30) days of shipment of the product concerned shall constitute a waiver of such claim by Buyer. Any product credit received by Buyer hereunder, if not used, shall automatically expire one (1) year from the date the credit was granted. Notwithstanding any applicable statute of

limitations to the contrary, any action by Buyer in relation to a claim hereunder must be instituted no later than two (2) years after the occurrence of the event upon which the claim is based. All the foregoing limitations shall apply irrespective of whether Buyer's claim is based upon breach of contract, breach of warranty, negligence, strict liability, or any other legal theory.

REICHHOLD

Material Safety Data Sheet

Revision Date: 27 Apr 2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description: **POLYLITE® 33306-25**

SAP ID(s): 193818; 193819
Chemical Family: Unsaturated Polyester Resin
Intended Use: Acrylic bonding

Manufacturer/Supplier:
Reichhold, Inc.
Corporate Headquarters
P.O. Box 13582
Research Triangle Park, NC 27709
USA
Tel +1-919-990-7500
Fax +1-919-767-8602

Emergency Telephone (Chemtrec) 1-800-424-9300

Email: prodsafety@reichhold.com

2. HAZARDS IDENTIFICATION

Emergency Overview:

WARNING!
Flammable Liquid
Vapors may form explosive mixtures with air
Vapor can travel to a source of ignition (spark or flame) and flash back
Harmful if swallowed
Hazardous polymerization may occur

Appearance: Red - Amber / Opaque **Physical State:** Liquid **Odor:** Pungent

Primary Routes of Entry Eye contact, Ingestion, Inhalation, Skin contact, Skin absorption.

Acute Effects

Eyes: Irritating to eyes.

Skin: Harmful by skin absorption. Contact causes skin irritation. Prolonged skin contact may defat the skin and produce dermatitis. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Inhalation: Harmful by inhalation. May cause irritation of respiratory tract. Inhalation of high vapor concentrations can cause CNS-depression and narcosis.

Ingestion: Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage. Ingestion is not an anticipated route of exposure for this material in industrial use.

Chronic Effects: This material contains a chemical which is listed by the International Agency for Research on Cancer (IARC) as a group 2B cancer causing agent (possibly carcinogenic to humans).

Target Organ(s): Liver, Kidney, Central nervous system (CNS), Respiratory system, Skin.

HMIS: **Health:** 2* **Flammability:** 3 **Reactivity:** 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %	Status
Styrene	100-42-5	34.0	Hazardous
Vinyl Toluene	25013-15-4	<12.0	Hazardous

3. COMPOSITION/INFORMATION ON INGREDIENTS

alpha-Methyl Styrene	98-83-9	1.5	Hazardous
Cobalt bis(2-ethylhexanoate)	136-52-7	<0.2	Hazardous

4. FIRST AID MEASURES

Skin Contact: Wash off with warm water and soap. Remove contaminated clothing and shoes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Eye Contact: Immediately flush eyes for at least 15 minutes. Get medical attention.

Inhalation: Remove person to fresh air. If signs/symptoms continue, get medical attention. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Get medical attention immediately.

Ingestion: DO NOT INDUCE VOMITING. ASPIRATION HAZARD. This material may enter the lungs during vomiting. Immediately give the victim one or two glasses of water or milk to drink. Never give anything by mouth to an unconscious person. GET IMMEDIATE MEDICAL ATTENTION.

5. FIRE-FIGHTING MEASURES

Flammability: Flammable liquid.

Suitable Extinguishing Media: Carbon dioxide (CO2), Foam, Dry chemical, Water spray.

Hazardous Combustion Products: Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors and gases.

Fire/Explosion Hazard: Flammable. Vapors may form explosive mixtures with air. Flash back possible over considerable distance. This material may polymerize (react) when its container is exposed to heat (as during a fire). This polymerization increases pressure inside a closed container and may result in the violent rupture of the container. Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death.

Protective Equipment and Precautions for Firefighters: Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazard while extinguishing the blaze. DO NOT extinguish a fire resulting from the flow of this flammable liquid until the flow of liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished. Use water spray to cool fire-exposed containers.

NFPA Rating: **Health** 2 **Flammability** 3 **Instability** 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Remove all sources of ignition. Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Soak up with inert absorbent material and dispose of as hazardous waste.

Methods for Containment: Prevent spilled material from 1) contaminating soil, 2) entering sanitary sewers, storm sewers, and drainage systems, and 3) entering bodies of water or ditches that lead to waterways. Prevent spreading over a wide area (e.g. by containment or oil barriers).

Methods for Clean-up: Soak up with inert absorbent material. Remove from surface water (e.g. by skimming or siphoning). Dispose of contaminated material as waste according to item 13.

7. HANDLING AND STORAGE

Handling: Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Ensure adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion-proof equipment. Consult your supplier of promoters and catalysts for additional instructions on proper mixing and usage. Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed.

Storage: Keep away from heat and sources of ignition. No smoking. Keep away from direct sunlight. Keep containers tightly closed in a cool, well-ventilated place. Keep at temperature not exceeding 25°C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Components with workplace control parameters.

Styrene (CAS #: 100-42-5)

ACGIH TLV - TWA	20 ppm
ACGIH TLV - STEL	40 ppm
OSHA PEL - TWA	100 ppm
OSHA PEL (Ceiling)	200 ppm
Industry PEL	While the federal workplace exposure limit for styrene is 100 ppm, OSHA accepted the styrene industry's proposal to voluntarily meet a PEL of 50 ppm on an 8 hour TWA and a Short Term Exposure Limit (STEL) of 100 ppm, 15 minute exposure.
Canada - Alberta OELs	85 mg/m³ (TWA) 170 mg/m³ (STEL)
Ontario OEL (TWA)	35 ppm
Ontario OEL (STEL)	100 ppm
British Columbia OELs	50 ppm (TWA) 75 ppm (STEL)
NIOSH IDLH	700 ppm Immediately dangerous to life or health (IDLH)
Mexico OEL	425 mg/m³ (STEL)

Vinyl Toluene (CAS #: 25013-15-4)

ACGIH TLV - TWA	50 ppm
ACGIH TLV - STEL	100 ppm
OSHA PEL - TWA	480 mg/m³ 100 ppm
Canada - Alberta OELs	242 mg/m³ (TWA) 483 mg/m³ (STEL)
Ontario OEL (TWA)	241 mg/m³
Ontario OEL (STEL)	482 mg/m³
British Columbia OELs	25 ppm (TWA) 75 ppm (STEL)
NIOSH IDLH	400 ppm Immediately dangerous to life or health (IDLH)
Mexico OEL	485 mg/m³ (STEL)

alpha-Methyl Styrene (CAS #: 98-83-9)

ACGIH TLV - TWA	10 ppm
OSHA PEL (Ceiling)	100 ppm

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Canada - Alberta OELs	242 mg/m³ (TWA) 483 mg/m³ (STEL)
Ontario OEL (TWA)	241 mg/m³
Ontario OEL (STEL)	482 mg/m³
British Columbia OELs	100 ppm (Ceiling) 50 ppm (TWA) 75 ppm (STEL)
NIOSH IDLH	700 ppm Immediately dangerous to life or health (IDLH)
Mexico OEL	485 mg/m³ (STEL)

Cobalt bis(2-ethylhexanoate) (CAS #: 136-52-7)

ACGIH TLV - TWA	0.02 mg/m³
Canada - Alberta OELs	0.02 mg/m³ (TWA)
British Columbia OELs	0.02 mg/m³ (TWA)

Legend

TLV - Threshold Limit Value
TWA - Time weighted average
STEL - Short Term Exposure Limit
IDLH - Immediately Dangerous to Life or Health
ACGIH - American Conference of Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH - National Institute for Occupational Safety and Health
OEL - Occupational Exposure Limit
PEL - Permissible Exposure Limit

Engineering Controls: Use general ventilation to maintain airborne concentrations to levels that are below regulatory and recommended occupational exposure limits. Local ventilation may be required during certain operations. Use explosion-proof equipment.

Personal Protective Equipment

Eye/face Protection: Wear safety glasses with side shields and a faceshield or goggles and a faceshield. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin Protection: Wear chemical-resistant gloves such as polyvinyl alcohol or Viton. Gloves made of nitrile rubber or polyvinyl chloride (PVC) may be used for splash protection and brief or intermittent contact with styrenated polyester resin. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Impervious clothing. Rubber or plastic boots.

Respiratory Protection: None required if hazards have been assessed and airborne concentrations are maintained below the exposure limits listed in Section 8. Wear an approved air-purifying respirator with organic vapor cartridges and particulate filters where airborne concentrations may exceed exposure limits in Section 8 and/or there is exposure to dust or mists due to sanding, grinding, cutting, or spraying. Use an approved positive-pressure air-supplied respirator with emergency escape provisions if there is any potential for an uncontrolled release, airborne concentrations are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Red - Amber / Opaque
Odor:	Pungent
Odor Threshold:	0.2 ppm (Styrene)
Physical State:	Liquid
pH:	Not applicable
Flash Point:	32°C / 89°F
Flash Point Method:	Seta closed cup
Autoignition Temperature:	490°C / 914°F (Styrene)
Boiling Point/Range:	146°C (Styrene)
Melting Point/Range:	-30°C / -23°F (Styrene)

9. PHYSICAL AND CHEMICAL PROPERTIES

Flammability Limits in Air

Lower:	1.1% (Styrene)
Upper:	6.1% (Styrene)
Specific Gravity:	1.03 - 1.08 @ 25°C
Solubility:	Insoluble in H_2O
Evaporation Rate:	< 1 (BuAc = 1)
Vapor Pressure:	6.12 mmHg @ 20°C (Styrene) 8.16 hPa (Styrene)
Vapor Density:	3.6 (Styrene) (Air = 1.0)
Percent volatile:	45 - 50 % by weight
VOC Content:	475 g/l (calculated) product as supplied

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions. Stable under recommended storage conditions.

Conditions to Avoid: Heat, flames and sparks. Contamination by those materials referred to under Incompatible materials.

Incompatible Materials: Strong acids. Strong oxidizing agents. Metal salts. Polymerization catalysts.

Hazardous Decomposition Products: Hydrocarbons. Carbon monoxide. Carbon dioxide (CO2). Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous Polymerization: Polymerization can occur. Hazardous polymerization will occur if contaminated with peroxides, metal salts and polymerization catalysts. Product will undergo hazardous polymerization at temperatures above 150 F (65 C).

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

No information available.

Styrene	
LD50 Oral	5000 mg/kg - rat
LC50 Inhalation	2770 ppm - rat (4 hours)
Vinyl Toluene	
LD50 Oral	2255 mg/kg - rat
LD50 Dermal	4500 mg/kg - rabbit
LC50 Inhalation	3020 mg/l (4 hours) - mouse
alpha-Methyl Styrene	
LD50 Oral	4900 mg/kg - rat

Eye Effects: Studies indicate that exposures to concentrations of styrene above 200 ppm cause irritation of the eyes. Styrene causes transient moderate eye irritation without corneal involvement.

Chronic Toxicity

No information available.

Styrene	
IARC	Group 2B - Possibly Carcinogenic to Humans
Vinyl Toluene	
IARC	Group 3 - The agent is not classifiable as to its carcinogenicity to humans
ACGIH	Group A4 - Not classifiable as a human carcinogen.
Cobalt bis(2-ethylhexanoate)	

IARC	Group 2B - Possibly Carcinogenic to Humans
Legend:	IARC - International Agency for Research on Cancer ACGIH - American Conference of Industrial Hygienists
Repeated dose toxicity:	In humans, styrene may cause a transient decrease in color discrimination and effects on hearing. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to defatting properties of the product. May cause damage to the kidneys, liver, eyes, brain, respiratory system, central nervous system through prolonged or repeated exposure if inhaled.
Sensitization:	May cause sensitization of susceptible persons by skin contact.
Mutagenic Effects:	Styrene has given mixed positive and negative results in a number of mutagenicity tests. It was not mutagenic without metabolic activation but gave negative and positive mutagenic results with metabolic activation.
Developmental Toxicity:	Results from studies in experimental animals indicate little or no potential for styrene to produce developmental toxicity.
Target Organ(s):	Liver, Kidney, Central nervous system (CNS), Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Styrene	
Bioconcentration factor (BCF)	13.5 - 64
Log Pow	3.16
Toxicity to Aquatic Invertebrates	LC50 (48h) 23 mg/l (Daphnia magna)
Freshwater Fish	LC50 (96h) 32 mg/l (pimephales promelas)
Vinyl Toluene	
Bioconcentration factor (BCF)	32 - 35
Freshwater Fish	LC50 2.6 mg/l (Lepomis macrochirus) LC50 5.2 mg/l (72 hr) (Pimephales promelas)
alpha-Methyl Styrene	
Freshwater Fish	LC50 (96h) 10 mg/l (pimephales promelas)

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Hazardous waste. Can be incinerated, when in compliance with local regulations.
Contaminated Packaging:	Empty containers should be taken for local recycling, recovery or waste disposal.
US EPA Waste Number:	D001 (IGNITABLE): When discarded in its purchased form, this material would be regulated under 40 CFR 261.21 as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

14. TRANSPORT INFORMATION

DOT

UN-No	UN1866
Proper Shipping Name:	RESIN SOLUTION
Hazard Class	3
Packing Group	III
NAERG:	127

14. TRANSPORT INFORMATION

TDG

UN-No	UN1866
Proper Shipping Name	RESIN SOLUTION
Hazard Class	CLASS 3
Packing Group	PGIII
NAERG:	127

IATA

UN-No	UN1866
Proper Shipping Name	RESIN SOLUTION
Hazard Class	3
Packing Group	III
NAERG:	127

IMDG/IMO

UN-No	UN1866
Proper Shipping Name	RESIN SOLUTION
Hazard Class	CLASS 3
Packing Group	PG III
EmS No.	F-E, S-E

15. REGULATORY INFORMATION

International Inventories

TSCA Inventory Status: All components of this material are listed on the US Toxic Substances Control Act (TSCA) inventory.

Canadian Inventory Status: This material contains components that are NOT listed on the Canadian Domestic Substances List (DSL).

Australian Inventory Status: This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.

Korean Inventory Status: This product contains one or more chemicals currently not on the Korean Chemical Substances List.

Chinese IECS: This product contains one or more chemicals currently not on the Chinese Inventory of Existing Chemical Substances.

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372:

Component	CAS-No	Weight %	SARA 313 Status
Styrene	100-42-5	34.0	Listed.
Cobalt bis(2-ethylhexanoate)	136-52-7	<0.2	Listed.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

TSCA 12(b) - Export Notification:
This material contains the following substances that are subject to TSCA 12(b):

Component	CAS-No	TSCA 12b Status
Vinyl Toluene	25013-15-4	1.0 % TSCA Section: 4 One-Time Export Notification only.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following HAPs:

Component	CAS-No	Weight %	HAPS data
Styrene	100-42-5	34.0	Listed.
Cobalt bis(2-ethylhexanoate)	136-52-7	<0.2	Listed.

CERCLA
This product contains the following reportable quantities:

Component	CERCLA/SARA	CERCLA 302 EHS RQs
Styrene	1000 lbs	Not Listed

State Regulations

California Proposition 65
W A R N I N G: This material contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B2 Flammable liquid
D2A Very toxic materials
D2B Toxic materials
F Dangerously reactive material

Component	CAS-No	WHMIS Ingredient Disclosure List
Styrene	100-42-5	0.1%
Vinyl Toluene	25013-15-4	1%
alpha-Methyl Styrene	98-83-9	1%

16. OTHER INFORMATION

Prepared By: Reichhold Product Regulatory Department

Revision Date: 27 Apr 2010

Revision Number: 5

Revision Summary: Formulation revision
This data sheet contains changes from the previous version in section(s):
2

Former date: 10 November 2009

This information is provided in good faith and is correct to the best of Reichhold's knowledge as of the date hereof and is designed to assist our customers; however, Reichhold makes no representation as to its completeness or accuracy. Our products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to suitability for their specific applications. Any use which Reichhold customers or third parties make of this information, or any reliance on, or decisions made based upon it, are the responsibility of such customer or third party. Reichhold disclaims responsibility for damages, or liability, of any kind resulting from the use of this information. THERE ARE NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THIS INFORMATION OR TO THE PRODUCT IT DESCRIBES. IN NO EVENT SHALL REICHHOLD BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

End of MSDS

CERTIFIED MAIL

January 7, 2011

James Fedczak (304) 926-0499 ext 1259
Permitting Section - Title V Permits
Division of Air Quality
West Virginia Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Beverly McKeone (304) 926-0499 ext 1260
Permitting Section - Rule13 Permits
Division of Air Quality
West Virginia Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

RE: Off-permit addition and operational flexibility in the renewed Title V permit
Permit numbers: Title V - R30-00300026-2007(SM01) and Rule 13 – R13-2006C
Company name: Aker Plastic Company, Inc.
Plant identification number: 00300026

Mr. Fedczak and Ms. McKeone:

Aker Plastic Company, Inc., a division of MAAX, Inc., currently owns and operates a reinforced plastic composites bathware manufacturing facility located at 718 Mid Atlantic Parkway, Martinsburg, WV 25401, which is called the Martinsburg Plant. This facility produces fiberglass composite bathware using the open molding fabrication process. Bathware is produced on two production lines inside one production building. The process emissions from the production lines are captured and conducted to a large preconcentrating regenerative thermal oxidizer (RTO) air pollution control system made by Dürr. The Dürr RTO system destroys at least 82% of the VOC and HAP emissions from the plant operations, and allows the facility to be classified as a minor PSD source.

The Martinsburg facility was issued a Title V air quality permit number R30-00300026-2007(SM01) on January 22, 2007 and a Rule 13 operating permit number R13-2006C on April 10, 2007 . Under these existing permits, the facility may emit no more than 91.1 tpy of styrene emissions and 92.08 tpy of total VOC emissions from the RTO exhaust stack. The facility is operating well below full capacity due to the depressed economy, and the actual emissions are presently much less than these maximum emission limits.

Compliance with thee permitted emission limits is monitored through detailed monthly process records and emission calculations. The process record lists the individual resin and gelcoat usages, the specific VOC contents in these materials, and the associated application methods. The emission calculations utilize the Unified Emission Factor (UEF) equations to compute the corresponding resin and gelcoat emissions. The UEF equations were the basis for the Composite MACT HAP equations in Table 1 to WWWW, and the UEF are referenced in AP-42 as the correct factors for open molding.

Pearl Acrylic Bathware Production

Our parent company, MAAX, Inc, also operates another bathware facility in the Minneapolis area that is called the Pearl Bathware facility. The Pearl facility produces acrylic bathware that is almost identical to the gelcoat bathware produced at the Martinsburg Plant with one difference. The exterior layer of a Pearl bathware unit consists of a thermoplastic acrylic shell instead of a gelcoat layer. The acrylic shell is produced on a specialized vacuum forming tool that heats a flat sheet of acrylic plastic to its softening point, and then forms the soft plastic into the final desired bathware shape using a vacuum molding process. The rest of the acrylic bathware production steps are the same as for gelcoat bathware. Several layers of resin and glass fiberglass reinforcement are applied to the acrylic shell using the same non-atomized resin applicator guns and rolled out with the same manual rollers. The acrylic bonding resin has a slightly different formulation mix of styrene and vinyl toluene monomers to ensure a strong bond between the acrylic thermoplastic and the thermoset laminate.

MAAX has decided to close permanently the Pearl facility. Aker Plastics proposes to move the Pearl acrylic bathware production to the Martinsburg Plant. The Pearl production could be integrated into the existing fiberglass production areas at the plant with very little modification. The gelcoat booths are unnecessary since gelcoat is not used. The existing resin mixing and piping systems will be used to handle the acrylic bonding resin. The existing production lines, the spray room areas, and the non-atomized resin applicator guns will be used for laminate application to the acrylic shells. The existing Dürr RTO system will capture and destroy the process emissions. The only new piece of equipment that will be needed is the vacuum forming tool, which will be shipped to Martinsburg from the Pearl Plant. The vacuum forming tool will be installed in an adjacent warehouse area inside the building and an overhead conveyor will be installed to connect the tool to the current production line. The proposed location of the new vacuum forming tool is shown in **Exhibit A**.

The proposed move must be accomplished quickly so that acrylic bathware production can commence in time for the spring construction demand. We believe that the proposed Pearl production meets the conditions for an off-permit change listed in our Title V permit for the following three reasons:

1. **No new emission sources** – the only new equipment required to make Pearl acrylic bathware units will be the vacuum forming tool. The forming process will have no measureable emissions, so this forming equipment should be exempt from permitting and will not be an emission source. The Pearl bathware production will utilize the existing permitted bathware production lines and process equipment at the facility. Essentially, the proposed Pearl addition will merely substitute a vacuum-formed shell in place of a gelcoated mold on the existing production lines.

2. **No increase in material usage** – we propose to include the acrylic bonding resin usage under the existing 12-million-pound-per-year resin usage limit in the current permit. Indeed, each produced acrylic unit will reduce the actual usage of gelcoat material when compared to the typical unit it will replace in the production queue.

3. **No increase in emissions** – the proposed Pearl production will not increase emissions or exceed the existing emission limits in the current Title V permit. In fact, each acrylic unit that is produced will reduce the actual styrene and MMA emission rates when compared to the gelcoat and resin emissions from the typical unit it will replace in the production queue. The maximum annual styrene and VOC emission rates, which are based on the currently permitted maximum annual gelcoat and resin material usage limits listed in the Title V permit, are computed in **Exhibit B-1**. This scenario uses the material data for the actual gelcoats and resin formulations. The corresponding maximum emission rates for the same scenario with acrylic units produced in place of typical units are computed in **Exhibit B-2**. The second scenario assumes that 17,000 acrylic units are produced with acrylic bonding resin. Comparing the two scenario shows that the annual VOC emission rate would decrease when producing acrylic units. Further, the maximum emissions rates for both scenarios are well below the permitted emission limits.

If DEP concurs that this proposal meets the criteria for an off-permit change, then we will proceed with the shipment and installation of the vacuum-forming tool and overhead conveyor line extension as soon as possible.

Operational Flexibility

The Pearl proposal caused us to take a closer look at our permit, and we believe more operational flexibility would be beneficial when our Title V permit is renewed. The permit should control the process emissions and not micromanage our process itself. For example, as shown earlier in **Exhibit B-1**, the material VOC content limits in the permit are now obsolete and no longer match the content data for the available production materials. The associated material usage limits have also become obsolete, because the material usage limits were originally based on the obsolete content limits.

The calculations in **Exhibit C** show the new material usage values that would best correspond to the emission limits listed in the permit for the latest mix of material formulations. These new calculations are for illustrative purposes only and are presented here to show the lack of operational flexibility that is inherent in the current permit limit scheme. We do not suggest that new material usage or VOC content limits should be established in the permit based on any specific material formulations. The amounts and types of monomers in future gelcoat and resin formulations will continue to change as new material formulations are developed and new monomers are substituted for styrene monomer.

Instead, we believe that the existing emission limits in Table 4.1.4 of the current permit and the HAP emission averaging compliance requirements under 40 CFR 63 subpart WWWW are sufficient to limit the emissions from the facility. The monthly emission calculations and the monthly MACT compliance calculations are sufficient to demonstrate compliance with the existing emissions limits. An itemized listing of content limits and usage limits, which may quickly become obsolete, are unnecessary and inflexible. Moreover, such "process limits" could be violated even though the underlying permitted emission limits are not exceeded. We hope to correct this in our permit renewal.

Title V Renewal

Our current Title V permit was issued on January 22, 2007 and will expire five years later on January 22, 2012. A permit renewal application must be submitted to DEP no sooner than 18 months and no later than 6 months before the permit expiration date. This time frame corresponds to an application submittal deadline of June 22, 2012. We will incorporate the Pearl operation description and our ideas for operational flexibility into the renewal application.

Work has already started on the application, and I expect the application will be submitted months ahead of the June 22 deadline. Aker Plastics has retained Dr. Rob Haberlein of Engineering Environmental Consulting Services to assist us with this off-permit request and our Title V permit renewal. Dr. Haberlein may contact you in the near future regarding the Title V permit and the best ways to incorporate operational flexibility into the renewed permit.

Please contact Dr. Haberlein or me, if you have any questions.

Respectfully submitted,

Benny Duvall
Plant Manager, Martinsburg Plant

attachments

Exhibit A - Plan View of the Martinsburg Plant

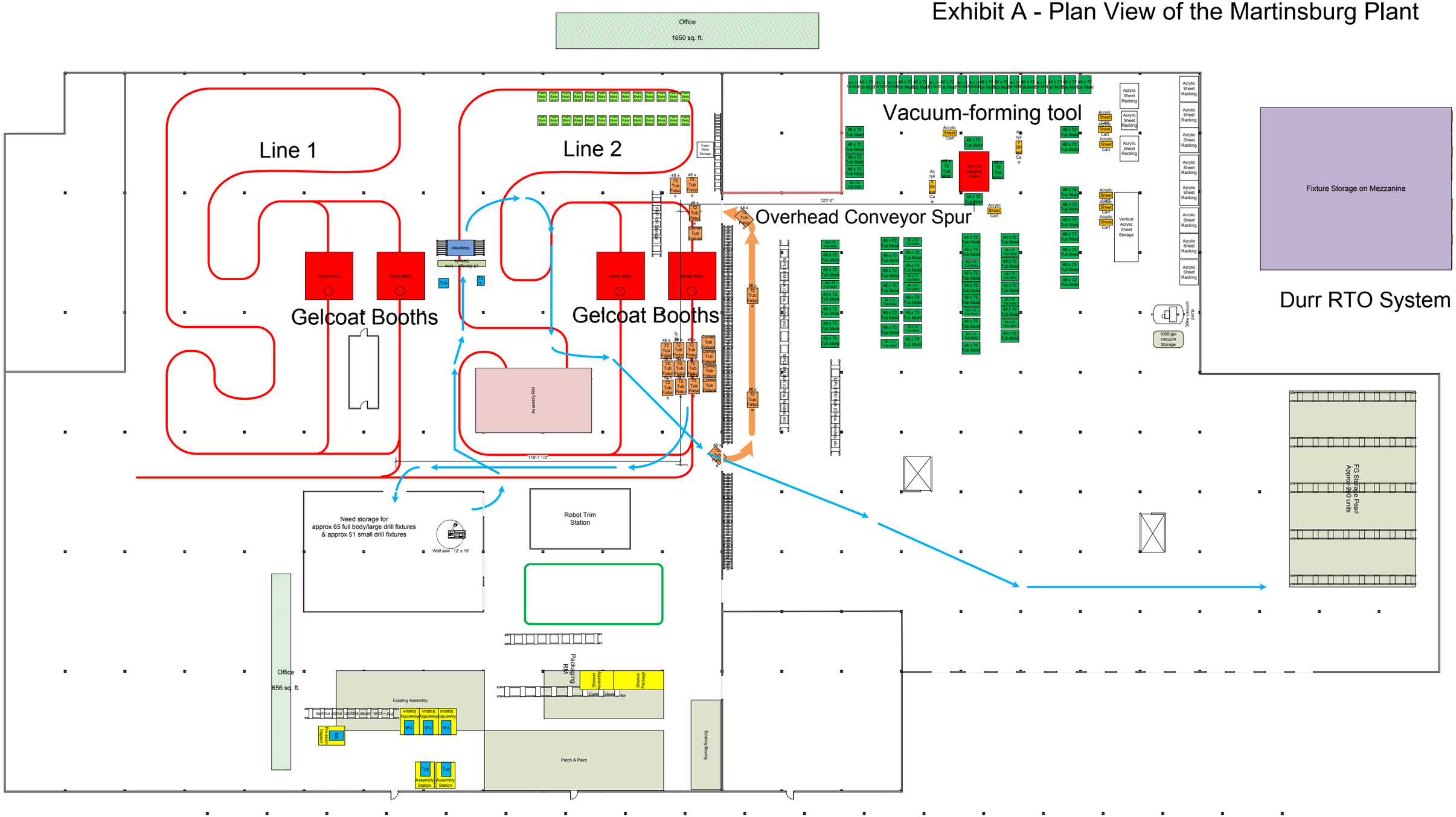

Exhibit B-1

This exhibit shows the disconnect between the obsolete permitted usage/content limits and the the current permitted emission limits.

MAAX Aker Plant
VOC/HAP Estimate
Uncontrolled & Controlled PTE with Current Materials

last revised January 7, 2011

Minimum Durr System Overall Control Efficiency	82%

Input values are shown in bold blue text

PTE Emissions - Uncontrolled			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
431.20	0.00	10.59	457.28

MSDS CoA #	Material Name	Application Process	Monthly Material Usages (lb/yr)	Notes	VOC/HAP Contents (% by weight) Styrene	MMA	AMS/VT	Other VOC	Notes	Emission Factors (% VOC/HAP by weight) UEF Styrene	UEF MMA	UEF AMS/VT	Other VOC	VOC/HAP Emissions (lb/yr) Styrene	MMA	AMS/VT	Other VOC
	RESINS																
	Production resin	NARA	12,000,000	max permitted	35.0%		3.0%	0.0%	note A	10.99%		5.89%	100%	461,400	0	21,186	0
	Gelcoat (all colors)	AGA	3,000,000	max permitted	30.0%	0.0%	0.0%	0.0%	note B	44.51%	75%	0.00%	100%	400,582	0	0	0
	Tooling resin	NARA	3,825	max permitted	46.8%		0.0%	1.7%	note C	12.17%		0.00%	100%	218	0	0	65
	Tooling gelcoat	AGA	1,170	max permitted	36.8%	0.0%	0.0%	5.0%	note C	44.51%	75%	0.00%	100%	192	0	0	59
			15,004,995														
	MISC VOC/HAP MATERIALS																
	Catalyst		600,000	max permitted				2.0%	note D				100%				12,000
WOLO	Mold release		15,000	max permitted				99.0%					100%				14,850
	Cleaner - UnisolveEX (DBE)		100,000	max permitted				99.6%	note E				0%				0
	Cleaner - Isopropanol		4,000	max permitted				100.0%					100%				4,000
													100%				0
														862,391	0	21,186	30,974

NOTES

Note A Permit (Table 3.1.18) limits the maximum Total VOC content of the production resin to 36%. the current resin VOC content is 38% with VT included

Note B Gelcoats do not contain MMA - max average styrene content assumed at 30%

Note C Monomer and VOC contents are max values in Permit Table 3.1.18

Note D Assumes that 2% MEK content is only emitted VOC species - emitted at 100% Catalyst to resin/gelcoat ratio is about 4% by wt

Note E Assumes that DEP accepts DBE as an exempt non-volatile cleaner

PTE Emissions - Controlled (after RTO)			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
91.10	9.11		92.08
77.62	0.00	1.91	82.31

Permitted Emission Limits from the RTO Stack (Table 4.1.4.)

Controlled PTE Emissions from the RTO Stack

Exhibit B-2

This exhibit shows the interim usage/content limits proposed in the January 7, 2011 off-permit change request letter.

MAAX Aker Plant
VOC/HAP Estimate
Uncontrolled & Controlled PTE with Pearl Spa Production
last revised January 7, 2011

Minimum Durr System Overall Control Efficiency	82%

Input values are shown in bold blue text

PTE Emissions - Uncontrolled			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
422.46	0.00	12.14	456.46

MSDS CoA #	Material Name	Application Process	Monthly Material Usages (lb/yr)	Notes	VOC/HAP Contents (% by weight) Styrene	MMA	AMS/VT	Other VOC	Notes	Emission Factors (% VOC/HAP by weight) UEF Styrene	UEF MMA	UEF AMS/VT	Other VOC	VOC/HAP Emissions (lb/yr) Styrene	MMA	AMS/VT	Other VOC
	RESINS																
	Production resin	NARA	11,500,000	max permitted	35.0%		3.0%	0.0%	note A	10.99%		5.89%	100%	442,175	0	20,303	0
	Gelcoat (all colors)	AGA	2,875,000	max permitted	30.0%	0.0%	0.0%	0.0%	note B	44.51%	75%	0.00%	100%	383,891	0	0	0
	Tooling resin	NARA	3,825	max permitted	46.8%		0.0%	1.7%	note C	12.17%		0.00%	100%	218	0	0	65
	Tooling gelcoat	AGA	1,170	max permitted	36.8%	0.0%	0.0%	5.0%	note C	44.51%	75%	0.00%	100%	192	0	0	59
33306-25	Pearl bonding resin	NARA	500,000	proposed	34.0%		13.5%	0.0%	note F	10.85%		5.89%	100%	18,440	0	3,972	0
			14,879,995														
	MISC VOC/HAP MATERIALS																
	Catalyst		600,000	max permitted				2.0%	note D				100%				12,000
WOLO	Mold release		15,000	max permitted				99.0%					100%				14,850
	Cleaner - UnisolveEX (DBE)		100,000	max permitted				99.6%	note E				0%				0
	Cleaner - Isopropanol		4,000	max permitted				100.0%					100%				4,000
													100%				0
tbd	Pearl PVC glue/primer		17,000	proposed				75.0%	note G				100%				12,750
														844,915	0	24,276	43,724

NOTES

Note A Permit (Table 3.1.18) limits the maximum Total VOC content of the production resin to 36%. the current resin VOC content is 38% with VT included

Note B Gelcoats do not contain MMA - max average styrene content assumed at 30%

Note C Monomer and VOC contents are max values in Permit Table 3.1.18

Note D Assumes that 2% MEK content is only emitted VOC species - emitted at 100% Catalyst to resin/gelcoat ratio is about 4% by wt

Note E Assumes that DEP accepts DBE as an exempt non-volatile cleaner

Note F Assume Pearl spa operation produces 17,000 units using 500,000 lb resin

Note G Assume 1 lb glue/primer used per spa unit at 75% VOC content - 100% emitted

PTE Emissions - Controlled (after RTO)			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
91.10	9.11		92.08
76.04	0.00	2.18	82.16

Permitted Emission Limits from the RTO Stack (Table 4.1.4.)

Controlled PTE Emissions from the RTO Stack

Exhibit C

This exhibit was included in the January 7, 2011 letter and attempted to reconcile the obsolete usage/contents limits.

MAAX Aker Plant
VOC/HAP Estimate
Uncontrolled & Controlled PTE with Actual Maximum Usage

last revised January 7, 2011

Minimum Durr System Overall Control Efficiency	82%

Input values are shown in bold blue text

PTE Emissions - Uncontrolled			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
482.40	0.00	11.85	511.58

MSDS CoA #	Material Name	Application Process	Monthly Material Usages (lb/yr)	Notes	VOC/HAP Contents (% by weight) Styrene	MMA	AMS/VT	Other VOC	Notes	Emission Factors (% VOC/HAP by weight) UEF Styrene	UEF MMA	UEF AMS/VT	Other VOC	VOC/HAP Emissions (lb/yr) Styrene	MMA	AMS/VT	Other VOC
	RESINS																
	Production resin	NARA	13,425,000	max permitted	35.0%		3.0%	0.0%	note A	10.99%		5.89%	100%	516,191	0	23,702	0
	Gelcoat (all colors)	AGA	3,356,250	max permitted	30.0%	0.0%	0.0%	0.0%	note B	44.51%	75%	0.00%	100%	448,151	0	0	0
	Tooling resin	NARA	4,279	max permitted	46.8%		0.0%	1.7%	note C	12.17%		0.00%	100%	244	0	0	73
	Tooling gelcoat	AGA	1,309	max permitted	36.8%	0.0%	0.0%	5.0%	note C	44.51%	75%	0.00%	100%	214	0	0	65
			16,786,838														
	MISC VOC/HAP MATERIALS																
	Catalyst		671,250	max permitted				2.0%	note D				100%				13,425
WOLO	Mold release		16,781	max permitted				99.0%					100%				16,613
	Cleaner - UnisolveEX (DBE)		111,875	max permitted				99.6%	note E				0%				0
	Cleaner - Isopropanol		4,475	max permitted				100.0%					100%				4,475
													100%				0
														964,800	0	23,702	34,652

NOTES

Note A Permit (Table 3.1.18) limits the maximum Total VOC content of the production resin to 36%. the current resin VOC content is 38% with VT included

Note B Gelcoats do not contain MMA - max average styrene content assumed at 30%

Note C Monomer and VOC contents are max values in Permit Table 3.1.18

Note D Assumes that 2% MEK content is only emitted VOC species - emitted at 100%

Note E Assumes that DEP accepts DBE as an exempt non-volatile cleaner

Note F Assume Pearl spa operation produces 17,000 units using 500,000 lb resin

Note G Assume 1 lb glue/primer used per spa unit at 75% VOC content - 100% emitted

Note H All other material usages proportionally scaled with the resin usage increase

PTE Emissions - Controlled (after RTO)			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
Permitted Emission Limits from the RTO Stack (Table 4.1.4.) 91.10	9.11		92.08
Maximum Controlled PTE Emissions from the RTO Stack 86.83	0.00	2.13	92.08

Exhibit D

This exhibit is the final proposal to reconcile the obsolete usage/content limits and incorporate the new Pearl acrylic materials

MAAX Aker Plant
VOC/HAP Estimate
Uncontrolled & Controlled PTE with New Maximum Usage

last revised January 7, 2012

Minimum Durr System Overall Control Efficiency **82%**

Input values are shown in bold blue text

PTE Emissions - Uncontrolled			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
474.59	0.00	9.93	511.54

SAP #	Material Name	Application Process	Monthly Material Usages (lb/yr)	Notes	VOC/HAP Contents (% by weight) Styrene	MMA	AMS/VT	Other VOC	Notes	Emission Factors (% VOC/HAP by weight) UEF Styrene	UEF MMA	UEF AMS/VT	Other VOC	VOC/HAP Emissions (lb/yr) Styrene	MMA	AMS/VT	Other VOC
	RESINS																
	Production resin	NARA	12,900,000	max permitted	35.0%		2.0%	0.0%	note A	10.99%		5.89%	100%	496,005	0	15,183	0
	Gelcoat (all colors)	AGA	3,225,000	max permitted	30.0%	0.0%	0.0%	0.02%	note B	44.51%	75%	0.00%	100%	430,625	0	0	645
	Tooling resin	NARA	6,000	max permitted	46.8%		0.0%	1.7%	note C	12.17%		0.00%	100%	342	0	0	102
	Tooling gelcoat	AGA	3,000	max permitted	36.8%	0.0%	0.0%	5.0%	note C	44.51%	75%	0.00%	100%	491	0	0	150
	Pearl bonding resin	NARA	589,000	proposed	34.0%		13.5%	0.0%	note F	10.85%	75%	5.89%	100%	21,722	0	4,679	0
			16,723,000														
	MISC VOC/HAP MATERIALS																
	Catalyst		840,000	max permitted				2.0%	note D				100%				16,800
	Mold release		16,500	max permitted				99.0%					100%				16,335
	Cleaner - UnisolveEX (DBE)		140,000	max permitted				99.6%	note E				0%				0
	Cleaner - Isopropanol		5,000	max permitted				100.0%					100%				5,000
	Pearl PVC glue/primer		20,000	proposed				75.0%	note G				100%				15,000
														949,186	0	19,863	54,032

NOTES

Note A Permit (Table 3.1.18) limits the maximum Total VOC content of the production resin to 36%.
Note B Gelcoats do not contain MMA - max average styrene content assumed at 30%
Note C Monomer and VOC contents are current max values in Permit Table 3.1.18
Note D Assumes that 2% MEK content is only emitted VOC species - emitted at 100%
Note E Assumes that DEP accepts DBE as an exempt non-volatile cleaner
Note F Assume Pearl spa operation produces 20,000 units using 588,000 lb resin
Note G Assume 1 lb glue/primer used per spa unit at 75% VOC content - 100% emitted
Note H All other material usages proportionally scaled with the resin usage increase

PTE Emissions - Controlled (after RTO)			
Styrene	MMA	AMS/VT	Total VOC
(tpy)			
91.10	9.11		92.08
85.43	0.00	1.79	92.08

Permitted Emission Limits from the RTO Stack (Table 4.1.4.)

Maximum Controlled PTE Emissions from the RTO Stack

Note that the new maximum styrene rate is less than the current limit.

Attachment L
MAAX Martinsburg (Aker Plastics)
Material Usage Record

Latest revision date: July 18, 2011

	Monthly Usages									Rolling 12-Month Usages								
	Cleaner Alcohol	Cleaner Unisolve	Mold Release	Catalyst	Tooling Resin	Tooling Gelcoat	Prod Resin	Prod Gelcoat	Bonding Resin	Cleaner Alcohol	Cleaner Unisolve	Mold Release	Catalyst	Tooling Resin	Tooling Gelcoat	Prod Resin	Prod Gelcoat	Bonding Resin
	(lb/mo)									(tpy)								
LIMITS (R13-2006c 4.1.5)	no monthly usage limits									2	50	7.5	300	1.913	0.585	6000	1500	n/a
Proposed New Limits										2.50	70	8.25	420	3.00	1.50	6,450	1,612.5	294.5
January 2010	0	467	38	5,780	0	0	262,255	71,890	0									
February 2010	0	467	38	6,994	0	0	246,562	68,670	0									
March 2010	0	934	0	10,194	40	0	352,064	98,550	0									
April 2010	0	1,401	38	9,531	0	0	332,936	90,542	0									
May 2010	0	467	38	8,636	0	45	329,007	85,507	0									
June 2010	0	1,401	38	8,523	0	0	329,744	88,063	0									
July 2010	0	467	38	8,309	0	0	329,954	91,757	0									
August 2010	0	467	38	9,137	0	0	353,718	108,136	0									
September 2010	0	467	38	9,137	0	0	326,508	96,616	0									
October 2010	0	934	0	9,109	0	0	286,629	83,489	0									
November 2010	0	934	38	9,638	40	45	295,699	83,019	0									
December 2010	0	467	0	9,372	0	0	292,226	83,936	0	0.00	4.44	0.17	52.18	0.040	0.045	1,868.7	525.1	0.0
January 2011	0	0	38	10,747	50	0	317,226	96,702	0	0.00	4.20	0.17	54.66	0.065	0.045	1,896.1	537.5	0.0
February 2011	0	934	38	8,959	0	0	286,181	89,683	0	0.00	4.44	0.17	55.65	0.065	0.045	1,915.9	548.0	0.0
March 2011	0	0	38	10,656	40	0	328,239	102,280	0	0.00	3.97	0.19	55.88	0.065	0.045	1,904.0	549.9	0.0
April 2011	0	0	38	9,611	0	0	310,853	99,018	10,014	0.00	3.27	0.19	55.92	0.065	0.045	1,893.0	554.1	5.0
May 2011	0	0	38	9,056	0	0	298,037	90,906	13,142	0.00	3.04	0.19	56.13	0.065	0.023	1,877.5	556.8	11.6
June 2011	0	0	0	10,393	0	45	365,406	113,549	16,485	0.00	2.34	0.17	57.06	0.065	0.045	1,895.3	569.5	19.8
July 2011	0	0	0	0	0	0	0	0	0	0.00	2.10	0.15	52.91	0.065	0.045	1,730.4	523.7	19.8
August 2011	0	0	0	0	0	0	0	0	0	0.00	1.87	0.13	48.34	0.065	0.045	1,553.5	469.6	19.8
September 2011	0	0	0	0	0	0	0	0	0	0.00	1.63	0.11	43.77	0.065	0.045	1,390.2	421.3	19.8
October 2011	0	0	0	0	0	0	0	0	0	0.00	1.17	0.11	39.22	0.065	0.045	1,246.9	379.5	19.8
November 2011	0	0	0	0	0	0	0	0	0	0.00	0.70	0.09	34.40	0.045	0.023	1,099.1	338.0	19.8
December 2011	0	0	0	0	0	0	0	0	0	0.00	0.47	0.09	29.71	0.045	0.023	953.0	296.1	19.8

Attachment L
MAAX Martinsburg (Aker Plastics)
VOC/HAP Emissions Record

Latest revision date July 18, 2011

	Summary of VOC/HAP Emissions											
	Monthly Weighted Average Contents					Monthly Emissions (after controls)			Annual Rolling 12-Mo Emissions (after controls)			
	Bonding Resin	Prod Gelcoat	Tooling Gelcoat	Prod Resin	Tooling Resin	Styrene	MMA	VOC	Styrene	MMA	VOC	
	(% wt)					(lb/mo)			(tpy)			
LIMITS (R13-2006c 4.1.4 - 5)	*47.5%*	36.0%	41.8%	37.0%	48.5%	no monthly limits			91.10	9.11	92.08	
January 2010	0.0%	29.8%	0.0%	37.0%	0.0%	3,537	0	3,623				
February 2010	0.0%	29.7%	0.0%	37.0%	0.0%	3,345	0	3,431				
March 2010	0.0%	29.8%	0.0%	37.0%	43.0%	4,793	0	4,907				
April 2010	0.0%	29.8%	0.0%	37.0%	0.0%	4,472	0	4,587				
May 2010	0.0%	29.8%	34.3%	37.0%	0.0%	4,320	0	4,430				
June 2010	0.0%	29.8%	0.0%	37.0%	0.0%	4,393	0	4,503				
July 2010	0.0%	29.8%	0.0%	37.0%	0.0%	4,477	0	4,586				
August 2010	0.0%	29.7%	0.0%	37.0%	0.0%	5,026	0	5,144				
September 2010	0.0%	29.8%	0.0%	37.0%	0.0%	4,567	0	4,678				
October 2010	0.0%	29.8%	0.0%	37.0%	0.0%	3,978	0	4,074				
November 2010	0.0%	29.8%	34.3%	37.0%	43.0%	4,037	0	4,144				
December 2010	0.0%	29.7%	0.0%	37.0%	0.0%	4,024	0	4,123	25.49	0.00	26.12	
January 2011	0.0%	29.8%	0.0%	37.0%	43.0%	4,507	0	4,622	25.97	0.00	26.61	
February 2011	0.0%	29.8%	0.0%	37.0%	0.0%	4,122	0	4,224	26.36	0.00	27.01	
March 2011	0.0%	29.8%	0.0%	37.0%	43.0%	4,716	0	4,834	26.32	0.00	26.98	
April 2011	47.5%	29.8%	0.0%	37.0%	0.0%	4,589	0	4,714	26.38	0.00	27.04	
May 2011	47.5%	29.8%	0.0%	37.0%	0.0%	4,324	0	4,448	26.38	0.00	27.05	
June 2011	47.5%	29.8%	34.3%	37.0%	0.0%	5,353	0	5,495	26.86	0.00	27.54	
July 2011	0.0%	0.0%	0.0%	0.0%	0.0%	0	0	0	24.62	0.00	25.25	
August 2011	0.0%	0.0%	0.0%	0.0%	0.0%	0	0	0	22.11	0.00	22.68	
September 2011	0.0%	0.0%	0.0%	0.0%	0.0%	0	0	0	19.83	0.00	20.34	
October 2011	0.0%	0.0%	0.0%	0.0%	0.0%	0	0	0	17.84	0.00	18.30	
November 2011	0.0%	0.0%	0.0%	0.0%	0.0%	0	0	0	15.82	0.00	16.23	
December 2011	0.0%	0.0%	0.0%	0.0%	0.0%	0	0	0	13.81	0.00	14.17	

Attachment L
MAAX Martinsburg (Aker Plastics)
Composite MACT Compliance Record

Latest revision date **July 18, 2011**

MONTH	Summary of Composite MACT Compliance				
	Monthly MACT Compliance Calculations (before Durr add-on controls)				Rolling 12-month
	Total MACT Material Usage	Weighted Average MACT Emissions	Weighted Average MACT Limit	Weighted Percent of Ave MACT Limit	Weighted Percent of Ave MACT Limit
	(lb/mo)	(lb/ton)	(lb/ton)	(% of limit)	(% of limit)
LIMITS	HAP emission averaging option per 40 CFR 63 WWWW				**100%**
January 2010	334,145	117.6	126.5	93.0%	
February 2010	315,232	117.9	127.0	92.8%	
March 2010	450,654	118.2	127.2	92.9%	
April 2010	423,478	117.3	126.3	92.9%	
May 2010	414,514	115.8	124.9	92.7%	
June 2010	417,807	116.8	125.7	92.9%	
July 2010	421,711	118.0	126.9	92.9%	
August 2010	461,854	120.9	129.9	93.1%	
September 2010	423,124	119.9	128.9	93.1%	
October 2010	370,118	119.4	128.4	93.0%	
November 2010	378,758	118.4	127.3	93.0%	
December 2010	376,162	118.9	127.9	92.9%	92.9%
January 2011	413,978	121.0	129.8	93.2%	93.0%
February 2011	375,864	121.9	130.7	93.2%	93.0%
March 2011	430,559	121.7	130.5	93.2%	93.0%
April 2011	419,885	121.4	130.2	93.3%	93.0%
May 2011	402,085	119.5	128.5	93.0%	93.1%
June 2011	495,440	120.0	129.0	93.0%	93.1%

Attachment L
MAAX Martinsburg (Aker Plastics)
Annual Natural Gas Combustion Emission Record

Latest revision date **July 18, 2011**

			AP-42 Emission Factors (lb/MMCF)					Permitted Emission Limits (R13-2006C 4.1.4)				
			5.5	**7.6**	**0.6**	**100**	**84**	**92.01**	**0.66**	**0.11**	**10.82**	**43.84**
CY	**Natural Gas Usage**		**Combustion Byproduct Emissions**					**Combustion Byproduct Emissions**				
	CCF/yr	MMCF/yr	VOC lb/yr	PM/PM10 lb/yr	SO_2 lb/yr	NO_X lb/yr	CO lb/yr	VOC tpy	PM/PM10 tpy	SO_2 tpy	NO_X tpy	CO tpy
2011		0.00	0	0	0	0	0	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Attachment L - Example Monthly Compliance Record

MAAX Martinsburg (Aker Plastics)

Monthly VOC/HAP/MACT Emission Record

Input values are shown in bold blue text

January 2010

last revised **July 8, 2011**

Monthly Usages									Average VOC Content				
Cleaner Alcohol	Cleaner Unisolve	Mold Release	Catalyst	Tooling Resin	Tooling Gelcoat	Prod Resin	Prod Gelcoat	Bonding Resin	Bonding Resin	Prod Gelcoat	Tooling Gelcoat	Prod Resin	Tooling Resin
(lb/mo)									(% VOC wt)				
0	467	38	5,780	0	0	262,255	71,890	0	0.0%	29.8%	0.0%	37.0%	0.0%

Durr Control Efficiency	Monthly Emissions Source-Wide (after Durr controls)		
	Styrene	MMA	VOC
(% control)	(lb/mo)		
82.0%	3,537	0	3,623

Monthly MACT Calculations		
Total MACT Material Usage	334,145	lb/mo
Weighted Average MACT Emissions	117.6	lb/ton
Weighted Average MACT Limit	126.5	lb/ton
Percentage of Average MACT Limit	93.0%	

SAP #	Material Name	Monthly Material Usages (lb/mo)	Material Class	Application Process	Average VOC/HAP Contents (% VOC/HAP by weight)						VOC/HAP Emission Factors (% VOC/HAP by weight)					VOC/HAP Emissions (lb/mo)					MACT Material Usage (lb/mo)	Total HAP Content (% wt)	MACT HAP Emissions (lb/ton)	MACT HAP Limit (lb/ton)	Percent of HAP Limit (%)
					Styrene	MMA	Other HAP	AMS VT	Other VOC	Total VOC	Styrene	MMA	Other HAP	AMS VT	Other VOC	Styrene	MMA	Other HAP	AMS VT	Other VOC					
	RESINS																								
10024805	Polylite Reichhold (Prod. Resin)	262,255	noncorrosion	NARA	35.0%	0.0%	0.0%	2.0%	0%	37.0%	10.99%	75.0%	100%	5.89%	100%	10,084	0	0	309	0	262,255	35.0%	76.9	88	87.4%
reserved	Acrylic Bonding Resin	0	noncorrosion	NARA	34.0%	0.0%	0.0%	13.5%	0%	47.5%	10.85%	75.0%	100%	5.89%	100%	0	0	0	0	0	0	34.0%	73.8	88	83.8%
10024629	Ashland 7241 T-15	0	tooling	NARA	43%	0.0%	0.0%	0.0%	0%	43.0%	11.86%	75.0%	100%	0.00%	100%	0	0	0	0	0	0	43.0%	102.0	254	40.2%
reserved	*new tool resin*																								
	GELCOATS																								
10017493-002	White Low VOC Gelcoat	59,694	white gel	AGA	29.6%	0.0%	0.0%	0.0%	0.0168%	29.6%	44.51%	75%	100%	0.00%	100%	7,859	0	0	0	10	59,694	29.6%	263.3	267	98.6%
10024630-004	HAP 37 Bone	4,837	white gel	AGA	33.9%	0.0%	0.0%	0.0%	0.0168%	33.9%	46.08%	75%	100%	0.00%	100%	756	0	0	0	1	4,837	33.9%	312.4	267	117.0%
10024630-006	HAP 37 Sterling Silver	28	white gel	AGA	34.9%	0.0%	0.0%	0.0%	0.0168%	34.9%	47.73%	75%	100%	0.00%	100%	5	0	0	0	0	28	34.9%	333.1	267	124.8%
10024630-007	HAP 30 BISCUIT	7,279	white gel	AGA	29.0%	0.0%	0.0%	0.0%	0.0168%	29.1%	44.51%	75%	100%	0.00%	100%	941	0	0	0	1	7,279	29.0%	258.5	267	96.8%
10024630-015	HAP 37 Black	11	white gel	AGA	35.1%	0.0%	0.0%	0.0%	0.0168%	35.1%	47.98%	75%	100%	0.00%	100%	2	0	0	0	0	11	35.1%	336.4	267	126.0%
10024630-017	HAP 37 Kohler Ice Gray	25	white gel	AGA	35.3%	0.0%	0.0%	0.0%	0.0168%	35.3%	48.37%	75%	100%	0.00%	100%	4	0	0	0	0	25	35.3%	341.6	267	127.9%
10024630-018	HAP 37 Tender Gray		white gel	AGA	34.6%	0.0%	0.0%	0.0%	0.0168%	34.6%	47.24%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.6%	326.9	267	122.4%
10024630-019	HAP 37 Thunder Gray	16	white gel	AGA	35.9%	0.0%	0.0%	0.0%	0.0168%	35.9%	49.24%	75%	100%	0.00%	100%	3	0	0	0	0	16	35.9%	353.2	267	132.3%
10024630-021	HAP 37 Dresden Blue		white gel	AGA	34.0%	0.0%	0.0%	0.0%	0.0168%	34.0%	46.26%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.0%	314.7	267	117.9%
10024630-023	HAP 37 Daydream		white gel	AGA	34.4%	0.0%	0.0%	0.0%	0.0168%	34.4%	46.91%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.4%	322.8	267	120.9%
10024630-024	HAP 37 Glacier Blue		white gel	AGA	35.8%	0.0%	0.0%	0.0%	0.0168%	35.8%	49.13%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.8%	351.8	267	131.8%
10024630-026	HAP 37 Kohler Navy Blue		white gel	AGA	35.6%	0.0%	0.0%	0.0%	0.0168%	35.7%	48.88%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.6%	348.4	267	130.5%
10024630-027	HAP 37 Rhapsody Blue		white gel	AGA	35.2%	0.0%	0.0%	0.0%	0.0168%	35.2%	48.20%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.2%	339.3	267	127.1%
10024630-029	HAP 37 Sky Light Blue		white gel	AGA	35.1%	0.0%	0.0%	0.0%	0.0168%	35.1%	48.01%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.1%	336.9	267	126.2%
10024630-033	HAP 37 Sage		white gel	AGA	33.2%	0.0%	0.0%	0.0%	0.0168%	33.2%	44.88%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.2%	298.1	267	111.7%
10024630-034	HAP 37 Seafoam Green		white gel	AGA	35.5%	0.0%	0.0%	0.0%	0.0168%	35.5%	48.67%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.5%	345.6	267	129.4%
10024630-035	HAP 37 Rain Forest		white gel	AGA	35.0%	0.0%	0.0%	0.0%	0.0168%	35.0%	47.82%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.0%	334.4	267	125.2%
10024630-036	HAP 37 Timberline Green		white gel	AGA	35.3%	0.0%	0.0%	0.0%	0.0168%	35.3%	48.33%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.3%	341.0	267	127.7%
10024630-037	HAP 37 Island Sea		white gel	AGA	36.0%	0.0%	0.0%	0.0%	0.0168%	36.0%	49.43%	75%	100%	0.00%	100%	0	0	0	0	0	0	36.0%	355.9	267	133.3%
10024630-038	HAP 37 Verde		white gel	AGA	36.1%	0.0%	0.0%	0.0%	0.0168%	36.1%	49.52%	75%	100%	0.00%	100%	0	0	0	0	0	0	36.1%	357.2	267	133.8%
10024630-042	HAP 37 Desert Bloom		white gel	AGA	33.6%	0.0%	0.0%	0.0%	0.0168%	33.6%	45.60%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.6%	306.6	267	114.8%
10024630-043	HAP 37 Peach Bisque		white gel	AGA	33.1%	0.0%	0.0%	0.0%	0.0168%	33.1%	44.62%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.1%	295.0	267	110.5%
10024630-044	HAP 37 Chamios		white gel	AGA	34.9%	0.0%	0.0%	0.0%	0.0168%	34.9%	47.68%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.9%	332.5	267	124.5%
10024630-046	HAP 37 Saffron Yellow		white gel	AGA	33.7%	0.0%	0.0%	0.0%	0.0168%	33.7%	45.72%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.7%	308.1	267	115.4%
10024630-047	HAP 37 Creamy Yellow		white gel	AGA	32.2%	0.0%	0.0%	0.0%	0.0168%	32.2%	44.51%	75%	100%	0.00%	100%	0	0	0	0	0	0	32.2%	286.5	267	107.3%
10024630-051	HAP 37 Jersey Cream		white gel	AGA	33.3%	0.0%	0.0%	0.0%	0.0168%	33.3%	45.04%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.3%	300.0	267	112.4%
10024630-053	HAP 37 Kohler Mexican Sand		white gel	AGA	35.5%	0.0%	0.0%	0.0%	0.0168%	35.5%	48.72%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.5%	346.2	267	129.7%
10024630-054	HAP 37 Fawn Beige		white gel	AGA	35.4%	0.0%	0.0%	0.0%	0.0168%	35.4%	48.44%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.4%	342.5	267	128.3%
10024630-055	HAP 37 Light Mink		white gel	AGA	35.5%	0.0%	0.0%	0.0%	0.0168%	35.5%	48.72%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.5%	346.2	267	129.7%
10024630-065	HAP 37 Logan Berry		white gel	AGA	35.0%	0.0%	0.0%	0.0%	0.0168%	35.0%	47.87%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.0%	335.0	267	125.5%
10024630-066	HAP 37 Innocent Blush		white gel	AGA	33.5%	0.0%	0.0%	0.0%	0.0168%	33.5%	45.39%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.5%	304.1	267	113.9%
10024630-067	HAP 37 Wild Rose		white gel	AGA	35.7%	0.0%	0.0%	0.0%	0.0168%	35.7%	48.95%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.7%	349.3	267	130.8%
10024630-068	Antique Red		white gel	AGA	0.0%	0.0%	0.0%	0.0%	0.0168%	0.0%	0.00%	75%	100%	0.00%	100%	0	0	0	0	0	0	0.0%	0.0	267	0.0%
10024630-069	HAP 37 Shell		white gel	AGA	34.4%	0.0%	0.0%	0.0%	0.0168%	34.4%	46.91%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.4%	322.8	267	120.9%
10024630-071	HAP 37 Dusty Rose		white gel	AGA	35.1%	0.0%	0.0%	0.0%	0.0168%	35.1%	48.00%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.1%	336.7	267	126.1%
10024630-072	HAP 37 Raspberry Puree		white gel	AGA	35.7%	0.0%	0.0%	0.0%	0.0168%	35.7%	48.98%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.7%	349.7	267	131.0%
10024630-073	HAP 37 Ruby		white gel	AGA	35.0%	0.0%	0.0%	0.0%	0.0168%	35.0%	47.92%	75%	100%	0.00%	100%	0	0	0	0	0	0	35.0%	335.6	267	125.7%
10024630-078	Pink Mist		white gel	AGA	0.0%	0.0%	0.0%	0.0%	0.0168%	0.0%	0.00%	75%	100%	0.00%	100%	0	0	0	0	0	0	0.0%	0.0	267	0.0%
10024630-142	HAP 37 Warm White		white gel	AGA	33.7%	0.0%	0.0%	0.0%	0.0168%	33.7%	45.65%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.7%	307.2	267	115.1%
10024630-143	HAP 37 Sandbar		white gel	AGA	34.6%	0.0%	0.0%	0.0%	0.0168%	34.6%	47.24%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.6%	326.9	267	122.4%
10024630-168	HAP 37 Sunlight		white gel	AGA	33.9%	0.0%	0.0%	0.0%	0.0168%	33.9%	46.11%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.9%	312.8	267	117.2%
10024630-165	HAP 37 Candlelight		white gel	AGA	33.2%	0.0%	0.0%	0.0%	0.0168%	33.3%	44.94%	75%	100%	0.00%	100%	0	0	0	0	0	0	33.2%	298.7	267	111.9%
10024630-169	HAP 37 Spring		white gel	AGA	34.3%	0.0%	0.0%	0.0%	0.0168%	34.3%	46.67%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.3%	319.7	267	119.7%
reserved	*new prod gelcoat*																								
10018050	CCP 965-YJ-07		tooling gel	AGA	34.3%	0.0%	0.0%	0.0%	0.0168%	34.3%	46.67%	75%	100%	0.00%	100%	0	0	0	0	0	0	34.3%	319.7	440	72.7%
reserved	*new tooling gelcoat*																								
		0	pigmented	AGA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	75%	100%	0.00%	100%	0	0	0	0	0	0	0.0%	0.0	377	0.0%
	MISC VOC/HAP MATERIALS																								
10000232	DDM9 clear	826	catalyst				0.0%		2%				100%		100%			0		17					
10024607	DDM9 red	4,954	catalyst				0.0%		2%				100%		100%			0		99					
10031379	Frekote WOLO	38	release				0.0%		99%				100%		100%			0		37					
10023153	Isopropyl Alcohol	0	cleaner				0.0%		100%				100%		100%			0		0					
10023183	Unisolve	467	cleaner				0.0%		100%				100%		0%			0		0					
	NON-VOC EXEMPT MATERIALS															19,652	0	0	309	165					

20,126 lb VOC/mo