

Facility ID: 1431091117 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

\*\*\*THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION\*\*\*

Facility ID: 1431091117 Emissions Unit ID: R001 Issuance type: Final State Permit To Operate

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**Part II - Special Terms and Conditions**

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
  - (a) None.

**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R001- gelcoat line 1	OAC rule 3745-31-05(A)(3) (PTI 14-05787)	Total combined emissions of organic compounds (OC) from emissions units R001 and R003, excluding cleanup, shall not exceed 3.50 tons/yr.  Total particulate emissions (PE) and particulate matter emissions 10 microns and less in diameter (PM-10) from R001 and R003 combined shall not exceed 0.33 pound per hour and 0.07 ton per year.
	OAC rule 3745-17-07(A)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), OAC rule 3745-21-07(G)(2) and OAC rule 3745-31-05(C). Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(2)	Emissions of organic compounds (OC) from emissions unit R001, excluding cleanup, shall not exceed 8 pounds per hour and 40 pounds per day.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid 40 CFR 63 Subpart WWWW.	See section A.2.b.

2. **Additional Terms and Conditions**
  - (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emissions limitations established in the permit, use of paper filter to control PM/PM-10 emissions and the production limitation.  
The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from Marblene Casting Line 1 (P001), Marblene Casting Line 2 (P002), Marble Shop Cleanup (P003), Gelcoat Line 1 (R001), Laminate Line (R002), Gelcoat Line 2 (R003) and other de minimus air contaminant source, as defined in OAC rule 3745-15-05, other air contaminant sources exempt from the requirement to obtain a permit-to-install pursuant to OAC rule 3745-31-03 installed subsequent to the issuance of this permit, combined, shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

**B. Operational Restrictions**

1. The maximum annual number of batches produced in emissions units R001 and R003, combined shall not exceed 4,380 batches.
2. The use of photochemically reactive materials (PCRM), as defined in OAC rule 3745-21-01(C)(5), for cleanup is prohibited in this emissions unit.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for emissions unit R001:
  - a. the company identification for each liquid organic material employed;
  - b. the number of gallons or pounds of each liquid organic material employed;
  - c. the organic compound content (in pounds per gallon) or the styrene content percentage of each liquid organic material, whichever is applicable;
  - d. the total organic compound emission rate for all liquid organic materials, in pounds of OC emitted per day;
  - e. the total number of hours the emissions unit was in operation; and
  - f. the average hourly organic compound emission rate for all liquid organic materials, i.e., (d)/(e), in pounds per hour (average).
  
2. The permittee shall collect and record the following information each month for the emissions units identified in term A.2.b:
  - a. the company identification for each liquid organic material employed;
  - b. the individual Hazardous Air Pollutant (HAP) content for each HAP of each liquid organic material in pounds, or percent, of individual HAP per gallon of liquid organic material, as applied, except for styrene, dimethyl phthalate, and methyl methacrylate, where the appropriate Unified Emission Factor corresponding to the HAP content of the organic material will also be recorded;
  - c. the number of gallons, or pounds, of each liquid organic material employed;
  - d. the total individual HAP emissions for each HAP from all liquid organic materials employed, in pounds or tons per month [for each HAP the sum of (b) times (c) for each liquid organic material];
  - e. the updated rolling, 12-month summation for each individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months of operation following issuance of this permit, this shall be a cumulative total for each calendar month;
  - f. the total combined HAP emissions from all liquid organic materials employed, in pounds or tons per month ; and
  - g. the updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. The permittee has existing records demonstrating compliance with the HAP emission limitations.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Monthly HAP records may be kept on a facility-wide basis.
  
3. The permittee shall maintain monthly records of the following production parameters for emissions units R001 and R003 combined:
  - a. the number of batches produced;
  - b. total amount of gelcoat applied, tons;
  - c. amount of mold release and slurry wax applied, tons;
  - d. OC content of each material used, percent (expressed as a decimal); and
  - e. the annual OC emissions, excluding cleanup.
  
4. The permittee shall collect and record the following information each month for cleanup material used for this emissions unit:
  - a. the company identification of each liquid organic material employed in this emissions unit; and
  - b. a record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
  
5. The permit to install for this emissions unit (R001) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN3 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN3 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):
 

Pollutant: styrene  
 TLV (mg/m3): 85  
 Maximum Hourly Emission Rate (lbs/hr): 14.09  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 375  
 MAGLC (ug/m3): 2029

The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(d), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial

Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which include the following information:
  - a. an identification of each day during which the average hourly organic compound emissions from emissions unit R001 exceeded 8 pounds per hour, and the actual average hourly organic compound emissions for each such day; and
  - b. an identification of each day during which the organic compound emissions from emissions unit R001 exceeded 40 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the rolling, 12-month HAP emission limitations set forth in term A.2.b. The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively.)
 

If no exceedances occurred, the permittee shall state so in the report.
3. The permittee shall submit annual reports which specify the total organic compound emissions from this emissions units R001 and R003 combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year.
4. The permittee shall submit annual reports that identify any exceedances of the batch production limitation for emissions units R001 and R003 combined, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.
5. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed as cleanup in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the exceedance occurs.
6. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):
 

Emission Limitation:

Total combined emissions of organic compounds (OC) from emissions units R001 and R003, excluding cleanup, shall not exceed 3.50 tons/yr.

Applicable Compliance Method:

OC emissions shall be calculated and compliance determined by using the following equation:

tons/yr of OC = TPY of OC in the form of styrene + TPY of OC in the form of Methyl Methacrylate (MMA) + TPY of OC from the mold release + TPY of OC from the wax slurry.

4380 batches/year x 5.62 lbs of gelcoat/batch x 1 ton/2000 lbs x 460 lbs of styrene/ton gelcoat\* x 1 ton/2000 lbs = 2.83 tons of OC in the form of styrene/year.

4380 batches/year x 5.62 lbs of gelcoat/batch x 1 ton/2000 lbs x 75 lbs of MMA/ton gelcoat\*\* x 1 ton/2000 lbs = 0.46 ton of OC in the form of MMA/year.

4380 batches/year x 0.08 lbs of mold release/batch x 1 lb of OC/ lb of mold release x ton/2000 lbs = 0.175 ton of OC from the mold release/year.

4380 batches/year x 0.02 lbs of wax slurry/batch x 0.82 lb of OC/ lb of wax slurry x ton/2000 lbs = 0.0359 ton of OC from the wax slurry/year.

Total OC emissions = 2.83 TPY + 0.46 TPY + 0.175 TPY + 0.0359 TPY = 3.50 TPY of OC.

\*Styrene emission factor of 460 lbs/ton of gelcoat (or applicable emission factor corresponding to the gelcoat styrene content from "Unified Emission Factors for Open molding of Composites", July 23, 2001).

\*\*Methyl methacrylate emission factor of 75 lbs/ton of gelcoat (or applicable emission factor corresponding to the gelcoat methyl methacrylate content from "Unified Emission Factors for Open Molding of Composites", July 23, 2001).

Emission Limitations:

Emissions of organic compounds (OC) from emission unit R001, excluding cleanup, shall not exceed 8 lbs/hr and 40 lbs/day.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping required in section C.1.

OC emissions shall be calculated and compliance determined by using the following equation:

$$\begin{aligned} \text{lbs/hr of OC} &= [(A) \times (B)] + [(A) \times (C)] + [(D) \times (E)] + [(F) \times (G)] \\ \text{lbs/day of OC} &= [(H) \times (B)] + [(H) \times (C)] + [(I) \times (E)] + [(J) \times (G)] \end{aligned}$$

where,

A = daily amount of gelcoat applied, tons/daily operating hours;  
 B = styrene emission factor of 460 lbs/ton of gelcoat (or applicable emission factor corresponding to the gelcoat styrene content from "Unified Emission Factors for Open molding of Composites", July 23, 2001);  
 C = methyl methacrylate emission factor of 75 lbs/ton of gelcoat (or applicable emission factor corresponding to the gelcoat methyl methacrylate content from "Unified Emission Factors for Open Molding of Composites", July 23, 2001);  
 D = daily amount of mold release used, lbs / daily operating hours;  
 E = OC content of mold release, percent (percent expressed as a decimal);  
 F = daily amount of slurry wax used, lbs / daily operating hours;  
 G = OC content of slurry wax, percent (percent expressed as a decimal);  
 H = daily amount of gelcoat applied, tons;  
 I = daily amount of mold release used, lbs; and  
 J = daily amount of slurry wax used, lbs.  
 Emission Limitations:

Total particulate emissions (PE) and particulate matter emissions 10 microns and less in diameter (PM-10) from emissions unit R001 and R003 combined shall not exceed 0.33 pound per hour and 0.07 ton per year.

Applicable Compliance Method:

PE/PM-10 emissions shall be calculated and compliance determined by using the following equation:

$$\begin{aligned} \text{lbs/hr of PE/PM-10} &= (A) \times (B) \times (C) \times (D) \\ \text{tons/yr of PE/PM-10} &= (B) \times (C) \times (D) \times (E) \times 0.0005 \end{aligned}$$

where,

A = hourly amount of gelcoat used, pounds = 61.25 lbs of gelcoat/hr;  
 B = emission factor of 0.72 lb of solids per lb of gelcoat;  
 C = 1 - transfer efficiency of 75%, expressed as a decimal (0.25), (from information contained in air PTI application number 14-04416, received July 31, 1997);  
 D = 1 - paint booth paper filter control efficiency of 97%, expressed as a decimal 0.03, (from information contained in air PTI application number 14-05787, received November 14, 2005); and  
 E = annual amount of gelcoat used, pounds = 24616 lbs of gelcoat/year.  
 Compliance with the HAP emission limitations in term A.2.b shall be demonstrated by the record keeping requirements specified in section C.2.  
 Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity as a six minute average, except as specified by rule.

Applicable compliance method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), Appendix A, U.S. EPA Reference Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

2. Formulation data or USEPA method 24 or 24A shall be used to determine the OC contents of the materials used in this emissions unit.
3. Compliance with the operational restriction in section B.1 shall be determined by the record keeping required in section C.3.
4. Compliance with the operational restriction in section B.2 shall be determined by the record keeping required in section C.4.

**F. Miscellaneous Requirements**

1. The following terms and conditions of this permit are federally enforceable: A, B, C.1 - C.4, D and E.