

Facility ID: 0448002090 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.

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Facility ID: 0448002090 Emissions Unit ID: P001 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>
50 pound mixer and associated closed molding process, 50-1	OAC rule 3745-31-05(A)(3)	0.47 pound of Organic Compounds (OC) per hour from resin mixing and molding, 2.1 tons of OC per year from resin mixing and molding, and see section 2.a.
	OAC rule 3745-31-05(C)	See section 2.b.
	OAC rule 3745-21-07(G)(2)	See section 2.c.

2. Additional Terms and Conditions

- (a) The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation. The combined styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

B. Operational Restrictions

1. The maximum styrene monomer weight percent, as applied, for the resins employed in this emissions unit shall not exceed the following:
 - a. pigmented resins used in the veining process- eighteen percent (18%)
 - b. all other polyester resins - thirty-four percent (34%).
2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the name and identification of each resin and catalyst employed;
 - b. the OC content of each resin and catalyst, in pounds per ton, as applied;

- c. the weight of each resin and catalyst applied, in tons;
 - d. the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% emission rate for each catalyst and an OC emission rate for each resin (as styrene) evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - e. the total number of hours the emissions unit was in operation; and
 - f. the average hourly OC emission rate for the resin and catalyst, i.e., (d)/(e), in pounds per hour (average).

[Note: The information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]
2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
- a. the name and identification of each cleanup material employed;
 - b. the OC content of each cleanup material, in pounds per gallon;
 - c. the number of gallons of each cleanup material utilized;
 - d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and
 - e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).
 - f. documentation on whether or not each cleanup material employed is a photochemically reactive material;
 - g. documentation on the HAP content of each cleanup material employed.

[Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]
3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
- a. the name and identification of each gelcoat, resin and catalyst employed;
 - b. the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
 - c. the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - d. the weight of each gelcoat, resin and catalyst applied, in tons;
 - e. the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
 - f. the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats or resins and catalysts recorded in (e).
4. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats and resins) 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer
- TLV (mg/m3): 85,200
- Maximum Hourly Emission Rate (lbs/hr): 14.4
- Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1979
- MAGLC (ug/m3): 2,028
- Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. 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 (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
- D. Reporting Requirements**
1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions limitations established under this permit.
 2. The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying resin (i.e., for weight fraction of styrene monomer) was employed.
 3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically reactive cleanup material was employed or a cleanup material containing HAPs was employed.
 4. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.
- E. Testing Requirements**
1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

Emission Limitation

0.47 pound of OC per hour from resin mixing and molding.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 30 pounds of resin and catalyst per hour and the 34% maximum styrene monomer weight percent allowed under the restrictions of this permit, and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.

Emission Limitation

2.1 tons of OC per year from resin mixing and molding.

Applicable Compliance Method

The annual emission limitation was developed by multiplying the 0.47 lb/hr OC emission rate by a maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation, compliance shall also be shown with the annual emission limitation.

Emission Limitation

OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.2.

Emission Limitation

styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.3.
- F. Miscellaneous Requirements**

1. None

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Facility ID: 0448002090 Emissions Unit ID: P002 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>
100 pound mixer and associated closed molding process, 100-1	OAC rule 3745-31-05(A)(3)	0.78 pound of Organic Compounds (OC) per hour from resin mixing and molding, 3.5 tons of OC per year from resin mixing and molding, and see section 2.a.
	OAC rule 3745-31-05(C)	See section 2.b.
	OAC rule 3745-21-07(G)(2)	See section 2.c.

2. Additional Terms and Conditions

- (a) The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation. The combined styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

B. Operational Restrictions

1. The maximum styrene monomer weight percent, as applied, for the resins employed in this emissions unit shall not exceed the following:
 - a. pigmented resins used in the veining process- eighteen percent (18%)
 - b. all other polyester resins - thirty-four percent (34%).
2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the name and identification of each resin and catalyst employed;
 - b. the OC content of each resin and catalyst, in pounds per ton, as applied;
 - c. the weight of each resin and catalyst applied, in tons;
 - d. the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% emission rate for each catalyst and an OC emission rate for each resin (as styrene) evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - e. the total number of hours the emissions unit was in operation; and
 - f. the average hourly OC emission rate for the resin and catalyst, i.e., (d)/(e), in pounds per hour (average).

[Note: The information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]

2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each cleanup material employed;
 - b. the OC content of each cleanup material, in pounds per gallon;
 - c. the number of gallons of each cleanup material utilized;
 - d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and
 - e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).
 - f. documentation on whether or not each cleanup material employed is a photochemically reactive material;
 - g. documentation on the HAP content of each cleanup material employed.

[Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each gelcoat, resin and catalyst employed;
 - b. the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
 - c. the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unifed Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - d. the weight of each gelcoat, resin and catalyst applied, in tons;
 - e. the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
 - f. the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats or resins and catalysts recorded in (e).
4. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats and resins) 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer

TLV (mg/m3): 85,200

Maximum Hourly Emission Rate (lbs/hr): 14.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1979

MAGLC (ug/m3): 2,028

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. 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 (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
- D. **Reporting Requirements**
 1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions limitations established under this permit.
 2. The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying resin (i.e., for weight fraction of styrene monomer) was employed.
 3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically reactive cleanup material was employed or a cleanup material containing HAPs was employed.
 4. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.
- E. **Testing Requirements**
 1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

Emission Limitation

0.78 pound of OC per hour from resin mixing and molding.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 50 pounds of resin and catalyst per hour and the 34% maximum styrene monomer weight percent allowed under the restrictions of this permit, and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.

Emission Limitation

3.5 tons of OC per year from resin mixing and molding.

Applicable Compliance Method

The annual emission limitation was developed by multiplying the 0.78 lb/hr OC emission rate by a maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation, compliance shall also be shown with the annual emission limitation.

Emission Limitation

OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.2.

Emission Limitation

styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.3.
- F. **Miscellaneous Requirements**
 1. None

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Facility ID: 0448002090 Emissions Unit ID: P003 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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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>
100 pound mixer and associated closed molding process, 100-2	OAC rule 3745-31-05(A)(3)	0.78 pound of Organic Compounds (OC) per hour from resin mixing and molding, 3.5 tons of OC per year from resin mixing and molding, and see section 2.a.
	OAC rule 3745-31-05(C)	See section 2.b.
	OAC rule 3745-21-07(G)(2)	See section 2.c.

2. Additional Terms and Conditions

- (a) The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation. The combined styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

B. Operational Restrictions

1. The maximum styrene monomer weight percent, as applied, for the resins employed in this emissions unit shall not exceed the following:
 - a. pigmented resins used in the veining process- eighteen percent (18%)
 - b. all other polyester resins - thirty-four percent (34%).
2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the name and identification of each resin and catalyst employed;
 - b. the OC content of each resin and catalyst, in pounds per ton, as applied;
 - c. the weight of each resin and catalyst applied, in tons;
 - d. the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% emission rate for each catalyst and an OC emission rate for each resin (as styrene) evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - e. the total number of hours the emissions unit was in operation; and
 - f. the average hourly OC emission rate for the resin and catalyst, i.e., (d)/(e), in pounds per hour (average).

[Note: The information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]
2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each cleanup material employed;
 - b. the OC content of each cleanup material, in pounds per gallon;
 - c. the number of gallons of each cleanup material utilized;

- d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and
- e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).
- f. documentation on whether or not each cleanup material employed is a photochemically reactive material;
- g. documentation on the HAP content of each cleanup material employed.
- [Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]
3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
- a. the name and identification of each gelcoat, resin and catalyst employed;
- b. the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
- c. the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
- d. the weight of each gelcoat, resin and catalyst applied, in tons;
- e. the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
- f. the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats or resins and catalysts recorded in (e).
4. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats and resins) 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer
- TLV (mg/m3): 85,200
- Maximum Hourly Emission Rate (lbs/hr): 14.4
- Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1979
- MAGLC (ug/m3): 2,028
- Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. 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 (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- 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.).
- If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
- D. Reporting Requirements**
- 1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions limitations established under this permit.
 - 2. The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying resin (i.e., for weight fraction of styrene monomer) was employed.
 - 3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically reactive cleanup material was employed or a cleanup material containing HAPs was employed.
 - 4. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.
- E. Testing Requirements**
- 1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
Emission Limitation

0.78 pound of OC per hour from resin mixing and molding.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 50 pounds of resin and catalyst per hour and the 34% maximum styrene monomer weight percent allowed under the restrictions of this permit, and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.
Emission Limitation

3.5 tons of OC per year from resin mixing and molding.

Applicable Compliance Method

The annual emission limitation was developed by multiplying the 0.78 lb/hr OC emission rate by a maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation, compliance shall also be shown with the annual emission limitation.
Emission Limitation

OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.2.
Emission Limitation

styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.3.
- F. Miscellaneous Requirements**
- 1. None

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

Facility ID: 0448002090 Emissions Unit ID: P004 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>
100 pound mixer and associated closed molding process, 100-3	OAC rule 3745-31-05(A)(3)	0.78 pound of Organic Compounds (OC) per hour from resin mixing and molding, 3.5 tons of OC per year from resin mixing and molding, and see section 2.a.
	OAC rule 3745-31-05(C)	See section 2.b.
	OAC rule 3745-21-07(G)(2)	See section 2.c.

2. Additional Terms and Conditions

- (a) The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation. The combined styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

B. Operational Restrictions

- 1. The maximum styrene monomer weight percent, as applied, for the resins employed in this emissions unit shall not exceed the following:
 - a. pigmented resins used in the veining process- eighteen percent (18%)
 - b. all other polyester resins - thirty-four percent (34%).
- 2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
- 3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.

C. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the name and identification of each resin and catalyst employed;
 - b. the OC content of each resin and catalyst, in pounds per ton, as applied;
 - c. the weight of each resin and catalyst applied, in tons;
 - d. the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% emission rate for each catalyst and an OC emission rate for each resin (as styrene) evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - e. the total number of hours the emissions unit was in operation; and
 - f. the average hourly OC emission rate for the resin and catalyst, i.e., (d)/(e), in pounds per hour (average).
 [Note: The information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]
- 2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each cleanup material employed;
 - b. the OC content of each cleanup material, in pounds per gallon;
 - c. the number of gallons of each cleanup material utilized;
 - d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and
 - e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).
 - f. documentation on whether or not each cleanup material employed is a photochemically reactive material;
 - g. documentation on the HAP content of each cleanup material employed.

[Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each gelcoat, resin and catalyst employed;
 - b. the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
 - c. the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - d. the weight of each gelcoat, resin and catalyst applied, in tons;
 - e. the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
 - f. the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats or resins and catalysts recorded in (e).

 4. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats and resins) 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer

TLV (mg/m3): 85,200

Maximum Hourly Emission Rate (lbs/hr): 14.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1979

MAGLC (ug/m3): 2,028

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. 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 (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

 5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
- D. Reporting Requirements**
1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions limitations established under this permit.

2. The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying resin (i.e., for weight fraction of styrene monomer) was employed.
 3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically reactive cleanup material was employed or a cleanup material containing HAPs was employed.
 4. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.
- E. Testing Requirements**
1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

Emission Limitation

0.78 pound of OC per hour from resin mixing and molding.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 50 pounds of resin and catalyst per hour and the 34% maximum styrene monomer weight percent allowed under the restrictions of this permit, and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.

Emission Limitation

3.5 tons of OC per year from resin mixing and molding.

Applicable Compliance Method

The annual emission limitation was developed by multiplying the 0.78 lb/hr OC emission rate by a maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation, compliance shall also be shown with the annual emission limitation.

Emission Limitation

OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.2.

Emission Limitation

styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.3.
- F. Miscellaneous Requirements**
1. None

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Facility ID: 0448002090 Emissions Unit ID: P005 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>
P005 - 250 pound mixer and associated closed molding process, 250-1	OAC rule 3745-31-05(A)(3)	2.9 pounds of Organic Compounds (OC) per hour from resin mixing and molding, 7.3 tons of OC per year from resin mixing and molding, and see sections 2.a and 2.b.
	OAC rule 3745-31-05(C)	See section 2.c.
	OAC rule 3745-21-07(G)(2)	40 pounds of OC per day from resin mixing and molding, and see section 2.d.
2. Additional Terms and Conditions		
(a) The requirements established pursuant to this rule are equivalent to the requirements of the 40 pounds of OC per day emission limitation of OAC rule 3745-21-07(G)(2). The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation. The combined styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation. The 8 pounds of OC per hour emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).		
B. Operational Restrictions		
1. The maximum styrene monomer weight percent, as applied, for the resins employed in this emissions unit shall not exceed the following:		
a. pigmented resins used in the veining process- eighteen percent (18%)		
b. all other polyester resins - thirty-four percent (34%).		
2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.		
3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.		
C. Monitoring and/or Record Keeping Requirements		
1. The permittee shall maintain daily records of the following information for this emissions unit:		
a. the name and identification of each resin and catalyst employed;		
b. the OC content of each resin and catalyst, in pounds per ton, as applied;		
c. the weight of each resin and catalyst applied, in tons;		
d. the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% emission rate for each catalyst and an OC emission rate for each resin (as styrene) evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);		
e. the total number of hours the emissions unit was in operation;		
f. the average hourly OC emission rate for the resin and catalyst, i.e., (d)/(e), in pounds per hour (average); and		
g. the rolling, 12-month total OC emissions from the resin and catalyst, calculated as a summation of the total daily OC emissions from the resin and catalyst recorded in (d).		
[Note: The information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]		
2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:		
a. the name and identification of each cleanup material employed;		
b. the OC content of each cleanup material, in pounds per gallon;		
c. the number of gallons of each cleanup material utilized;		
d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and		
e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).		
f. documentation on whether or not each cleanup material employed is a photochemically reactive material;		
g. documentation on the HAP content of each cleanup material employed.		
[Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]		
3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:		

- a. the name and identification of each gelcoat, resin and catalyst employed;
 - b. the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
 - c. the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - d. the weight of each gelcoat, resin and catalyst applied, in tons;
 - e. the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
 - f. the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats, resins and catalysts recorded in (e).
4. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats and resins) 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer

TLV (mg/m3): 85,200

Maximum Hourly Emission Rate (lbs/hr): 14.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1979

MAGLC (ug/m3): 2,028

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. 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 (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions limitations established under this permit.
2. The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying resin (i.e., for weight fraction of styrene monomer) was employed.
3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically

reactive cleanup material was employed or a cleanup material containing HAPs was employed.

4. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

Emission Limitation

2.9 pounds of OC per hour from resin mixing and molding.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 184 pounds of resin and catalyst per hour and the 34% maximum styrene monomer weight percent allowed under the restrictions of this permit, and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.

Emission Limitation

40 pounds of OC per day from resin mixing and molding.

Applicable Compliance Method

Compliance with the monthly and annual emission limitations shall be determined by the record keeping required in condition C.1.

Emission Limitation

7.3 tons of OC per year from resin mixing and molding.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.1.

Emission Limitation

OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.2.

Emission Limitation

styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.3.

F. Miscellaneous Requirements

1. None

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Facility ID: 0448002090 Emissions Unit ID: P006 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>
P006 - 250 pound mixer and associated closed molding process, 250-2	OAC rule 3745-31-05(A)(3)	2.9 pounds of Organic Compounds (OC) per hour from resin mixing and molding, 7.3 tons of OC per year from resin mixing and molding, and see sections 2.a and 2.b.
	OAC rule 3745-31-05(C)	See section 2.c.
	OAC rule 3745-21-07(G)(2)	40 pounds of OC per day from resin mixing and molding, and see section 2.d.

2. Additional Terms and Conditions

- (a) The requirements established pursuant to this rule are equivalent to the requirements of the 40 pounds of OC per day emission limitation of OAC rule 3745-21-07(G)(2).
The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.
The combined styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation.
The 8 pounds of OC per hour emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

B. Operational Restrictions

- 1. The maximum styrene monomer weight percent, as applied, for the resins employed in this emissions unit shall not exceed the following:
 - a. pigmented resins used in the veining process- eighteen percent (18%)
 - b. all other polyester resins - thirty-four percent (34%).
- 2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
- 3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.

C. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the name and identification of each resin and catalyst employed;
 - b. the OC content of each resin and catalyst, in pounds per ton, as applied;
 - c. the weight of each resin and catalyst applied, in tons;
 - d. the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% emission rate for each catalyst and an OC emission rate for each resin (as styrene) evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - e. the total number of hours the emissions unit was in operation;
 - f. the average hourly OC emission rate for the resin and catalyst, i.e., (d)/(e), in pounds per hour (average); and
 - g. the rolling, 12-month total OC emissions from the resin and catalyst, calculated as a summation of the total daily OC emissions from the resin and catalyst recorded in (d).

[Note: The information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]
- 2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each cleanup material employed;
 - b. the OC content of each cleanup material, in pounds per gallon;
 - c. the number of gallons of each cleanup material utilized;
 - d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and
 - e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).
 - f. documentation on whether or not each cleanup material employed is a photochemically reactive material;
 - g. documentation on the HAP content of each cleanup material employed.

[Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
- the name and identification of each gelcoat, resin and catalyst employed;
 - the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
 - the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - the weight of each gelcoat, resin and catalyst applied, in tons;
 - the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
 - the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats, resins and catalysts recorded in (e).

4. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats and resins) 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer

TLV (mg/m³): 85,200

Maximum Hourly Emission Rate (lbs/hr): 14.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1979

MAGLC (ug/m³): 2,028

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- 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
- 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":
- a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

- The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions limitations established under this permit.
- The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying

resin (i.e., for weight fraction of styrene monomer) was employed.

3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically reactive cleanup material was employed or a cleanup material containing HAPs was employed.
4. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

Emission Limitation

2.9 pounds of OC per hour from resin mixing and molding.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 184 pounds of resin and catalyst per hour and the 34% maximum styrene monomer weight percent allowed under the restrictions of this permit, and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.

Emission Limitation

40 pounds of OC per day from resin mixing and molding.

Applicable Compliance Method

Compliance with the monthly and annual emission limitations shall be determined by the record keeping required in condition C.1.

Emission Limitation

7.3 tons of OC per year from resin mixing and molding.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.1.

Emission Limitation

OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.2.

Emission Limitation

styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.3.

F. Miscellaneous Requirements

1. None

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Facility ID: 0448002090 Emissions Unit ID: P007 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>
P007 - 300 pound mixer and associated closed molding process, 300-1	OAC rule 3745-31-05(A)(3)	3.6 pounds of Organic Compounds (OC) per hour from resin mixing and molding, 7.3 tons of OC per year from resin mixing and molding; and see section 2.a.
	OAC rule 3745-31-05(C)	See section 2.b.
	OAC rule 3745-21-07(G)(2)	40 pounds of OC per day from resin mixing and molding, and see section 2.c.

2. **Additional Terms and Conditions**

- (a) The requirements established pursuant to this rule are equivalent to the requirements of the 40 pounds of OC per day emission limitation of OAC rule 3745-21-07(G)(2). The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation. The combined styrene emissions from the resins and gelcoats utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation. The 8 pounds of OC per hour emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

B. **Operational Restrictions**

1. The maximum styrene monomer weight percent, as applied, for the resins employed in this emissions unit shall not exceed the following:
 - a. pigmented resins used in the veining process- eighteen percent (18%)
 - b. all other polyester resins - thirty-four percent (34%).
2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.

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

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the name and identification of each resin and catalyst employed;
 - b. the OC content of each resin and catalyst, in pounds per ton, as applied;
 - c. the weight of each resin and catalyst applied, in tons;
 - d. the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% emission rate for each catalyst and an OC emission rate for each resin (as styrene) evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - e. the total number of hours the emissions unit was in operation;
 - f. the average hourly OC emission rate for the resin and catalyst, i.e., (d)/(e), in pounds per hour (average); and
 - g. the rolling, 12-month total OC emissions from the resin and catalyst, calculated as a summation of the total daily OC emissions from the resin and catalyst recorded in (d).

[Note: The information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]
2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each cleanup material employed;
 - b. the OC content of each cleanup material, in pounds per gallon;
 - c. the number of gallons of each cleanup material utilized;
 - d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and
 - e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).
 - f. documentation on whether or not each cleanup material employed is a photochemically reactive material;

- g. documentation on the HAP content of each cleanup material employed.

[Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
- the name and identification of each gelcoat, resin and catalyst employed;
 - the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
 - the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - the weight of each gelcoat, resin and catalyst applied, in tons;
 - the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
 - the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats, resins and catalysts recorded in (e).
4. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats and resins) 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer

TLV (mg/m3): 85,200

Maximum Hourly Emission Rate (lbs/hr): 14.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1979

MAGLC (ug/m3): 2,028

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- 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
- 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions

limitations established under this permit.

2. The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying resin (i.e., for weight fraction of styrene monomer) was employed.
3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically reactive cleanup material was employed or a cleanup material containing HAPs was employed.
4. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

Emission Limitation

3.6 pounds of OC per hour from resin mixing and molding.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 228 pounds of resin and catalyst per hour and the 34% maximum styrene monomer weight percent allowed under the restrictions of this permit, and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.

Emission Limitation

40 pounds of OC per day from resin mixing and molding.

Applicable Compliance Method

Compliance with the monthly and annual emission limitations shall be determined by the record keeping required in condition C.1.

Emission Limitation

7.3 tons of OC per year from resin mixing and molding.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.1.

Emission Limitation

OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.2.

Emission Limitation

styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons as a rolling, 12-month summation.

Applicable Compliance Method

Compliance with the annual emission limitations shall be determined by the record keeping required in condition C.3.

F. Miscellaneous Requirements

1. None

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Facility ID: 0448002090 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>
Gelcoat Spraybooth, SB #1	OAC rule 3745-31-05(A)(3)	6.7 pounds of Organic Compounds (OC) per hour from gelcoat application, 7.3 tons of OC per year from gelcoat application, 0.19 pound of particulate emissions (PE) per hour, 0.80 ton of PE per year, and see sections 2.a and 2.b.
	OAC rule 3745-31-05(C)	See section 2.c.
	OAC rule 3745-17-07(A)(1)	See section 2.d.
	OAC rule 3745-17-11(B)(1)	See section 2.e.
	OAC rule 3745-21-07(G)(2)	40 pounds of OC per day from gelcoat application, and see section 2.f.

2. **Additional Terms and Conditions**

- (a) The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1) and the 40 pounds of OC per day emission limitation of OAC rule 3745-21-07(G)(2). The combined OC emissions from cleanup materials utilized in emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 20 tons of OC as a rolling, 12-month summation. The combined styrene emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 shall not exceed 9.5 tons of styrene as a rolling, 12-month summation. Visible emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The 8 pounds of OC per hour emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

B. **Operational Restrictions**

1. The maximum styrene monomer weight percent, as applied, for the gelcoats employed in this emissions unit shall not exceed the following:
- clear gelcoats - forty four percent (44%)
 - all other gelcoats - thirty percent (30%)
2. The use of photochemically reactive cleanup materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
3. The use of cleanup materials containing Hazardous Air Pollutants (HAPs), as defined in 112(G) of the Clean Air Act, in this emissions unit is prohibited.
4. The permittee shall operate the dry filtration system whenever this emissions unit is in operation.

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

1. The permittee shall maintain daily records of the following information for this emissions unit:
- the name and identification of each gelcoat (resin and catalyst) employed;
 - the OC content of each gelcoat, in pounds per ton, as applied;
 - the weight of each gelcoat applied, in tons;
 - the total daily OC emissions, calculated as a summation of (b) times (c) for each resin and catalyst employed, in pounds per day, assuming a 100% OC loss for the catalyst and an OC emission rate for each gelcoat, in pounds of OC (as styrene) per ton of gelcoat processed, evaluated using Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat);
 - the total number of hours the emissions unit was in operation;
 - the average hourly OC emission rate for the gelcoat, i.e., (d)/(e), in pounds per hour (average); and
 - the rolling, 12-month total OC emissions from the gelcoat (resin and catalyst), calculated as a summation of the total daily OC emissions from the gelcoat (resin and catalyst) recorded in (d).
- [Note: The gelcoat information must be for the resin as employed, including any catalysts and thinning solvents added at the emissions unit.]
2. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
- the name and identification of each cleanup material employed;

- b. the OC content of each cleanup material, in pounds per gallon;
- c. the number of gallons of each cleanup material utilized;
- d. the total monthly OC emissions from the cleanup materials, calculated as a summation of (b) times (c) for each cleanup material employed, in pounds per month; and
- e. the rolling, 12-month total OC emissions from the clean up materials for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the total monthly OC emissions from the cleanup materials recorded in (d).
- f. documentation on whether or not each cleanup material employed is a photochemically reactive material;
- g. documentation on the HAP content of each cleanup material employed.

[Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

- 3. The permittee shall maintain monthly records of the following information for emissions units R001, P001, P002, P003, P004, P005, P006 and P007:
 - a. the name and identification of each gelcoat, resin and catalyst employed;
 - b. the weight fraction of styrene monomer (in percent by weight) for each gelcoat, resin and catalyst, as applied;
 - c. the styrene emission rate for each gelcoat spray application, in pounds of styrene per ton of gelcoat processed, evaluated using: for gelcoat application, Table 3 Unified Emission Factor (UEF) Table, page 20 of "Technical Discussion of the Unified Emissions Factors for Open Molding of Composites" by R. Haberlein, Engineering Environmental Consulting Services, dated April 7, 1999 and supplied by the Composites Fabricators Association, (e.g., 522 pounds of styrene per ton of a 44% styrene gelcoat); and for each closed molding operation, the styrene emission rate evaluated using an emission factor of 3% by weight of the total styrene processed (AP-42, Table 4.12-2 dated 9/88);
 - d. the weight of each gelcoat, resin and catalyst applied, in tons;
 - e. the total monthly styrene emissions, calculated as a summation of (c) times (d) for each gelcoat, resin and catalyst employed.
 - f. the rolling, 12-month total styrene emissions for emissions units R001, P001, P002, P003, P004, P005, P006 and P007, calculated as a summation of the monthly styrene emissions for all gelcoats or resins and catalysts recorded in (e).
- 4. The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.
- 5. The permit to install for the combined emissions from emissions units R001, P001, P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials (gelcoats, resins, catalysts and cleanup 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 for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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 monomer

TLV (mg/m3): 85,200

Maximum Hourly Emission Rate (lbs/hr): 14.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1979

MAGLC (ug/m3): 2,028

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. 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 (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

6. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
- D. **Reporting Requirements**
 1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the emissions limitations established under this permit.
 2. The permittee shall submit deviation (excursion) reports which identify all periods of time that a noncomplying gelcoat (i.e., for weight fraction of styrene monomer) was employed.
 3. The permittee shall submit deviation (excursion) reports which identify all periods of time that a photochemically reactive cleanup material was employed or a cleanup material containing HAPs was employed.
 4. The permittee shall notify the Toledo Division of Environmental Services in writing of any daily record showing that the dry filtration system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the event occurs.
 5. Except as otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit.
- E. **Testing Requirements**
 1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

Emission Limitation

6.7 pounds of OC per hour from gelcoat application.

Applicable Compliance Method

The hourly emissions limitation represents the potential to emit for this emissions unit, i.e., the maximum usage rate of 25 pounds of gelcoat per hour, 44% maximum styrene monomer weight percent allowed under the restrictions of this permit and a maximum catalyst OC concentration of 2%, calculated using the equations in condition C.1. above. If required the permittee shall also perform stack testing utilizing the methods and procedures of Methods 1 through 4 and Method 25 of 40 CFR 60, Appendix A.

Emission Limitation

40 pounds of OC per day from gelcoat application.

Applicable Compliance Method

Compliance with the monthly and annual emission limitations shall be determined by the record keeping required in condition C.1.d.

Emission Limitation

7.3 tons of OC per year from gelcoat application.

Applicable Compliance Method

The 7.3 TPY emission limitation was developed by multiplying the 40 lb/day emission rate by a maximum operating schedule of 365 days/year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation, compliance shall also be shown with the annual emission limitation.

Emission Limitation

Visible emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule.

Applicable Compliance Method

If required, the permittee shall demonstrate compliance by visible emission readings performed in compliance with the methods and procedures of OAC rule 3745-17-03(B)(1).

Emission Limitation

0.19 pound of PE hour and 0.80 ton PE per year.

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated by multiplying the maximum usage rate of 25 pounds coating per hour by the maximum % solids [1 - 0.44] by the transfer efficiency [1 - 0.35] times the control efficiency of the dry filtration system [1 - 0.98]. Compliance with the annual emission limitation shall be determined by multiplying the hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton and by the record keeping required in condition C.4. If required, the permittee shall also demonstrate compliance with the hourly limitation by stack testing in performed in compliance with the methods and procedures of OAC rule 3745-17-03(B)(10).
- F. **Miscellaneous Requirements**
 1. None