



OAQ PROCESS INFORMATION APPLICATION

PI-16: Reinforced Plastics & Composites

State Form 52557 (R2 / 1-10)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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NOTES:

- The purpose of this form is to obtain detailed information about the process. Complete one form for each process unit (or group of identical process units). This is a required form.
- Detailed instructions for this form are available on the Air Permit Application Forms website.
- All information submitted to IDEM will be made available to the public unless it is submitted under a claim of confidentiality. Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in 326 IAC 17.1-4-1. Failure to follow these requirements exactly will result in your information becoming a public record, available for anyone to inspect and photocopy.

PART A: Process Information

Part A identifies the process. If there are multiple process units that are identical in nature, capacity, and use, you may use one form to summarize the data for the identical process units.

1. Unit ID:

2. Installation Date:
(actual or anticipated)

3. How many (identical) process units are identified in this form?

One More than one *(specify number):*

4. Type of Unit

Open Molding: Resin Gel Coat **Complete Part B of this form.**

Closed Molding: Resin Transfer Molding (RTM) Resin Injection Molding (RIM)
 Sheet Molding Compound (SMC) Manufacturing
 Bulk Molding Compound (BMC) Manufacturing
 Compression Molding Other *(specify):*

Polymer Casting: Cultured Marble Polymer Concrete Other *(specify):*

Centrifugal Casting: Vented molds, but air vented through the molds are not heated
 Heated air blown through molds Other *(specify):*

Filament Winding with resin bath

Continuous Lamination / Casting

Pultrusion

Mixing

Other *(specify):*

5. Products Produced:

6. Product Type:

Resin: Filled Corrosion-Resistant and/or High Strength (CR/HS) Non CR/HS
 Unfilled Low-Flame Spread/Low-Smoke Shrinkage Controlled
 Tooling Other *(specify):*

Gel Coat: Clear Production White/Off White Pigmented All Other Pigmented
 High Performance Corrosion-Resistant and/or High Strength
 Fire Retardant Tooling Other *(specify):*

7. Maximum Production Rate: _____ parts per hour

8. Mixer Capacity: _____ pounds per hour (lb/hr)

PART B: Open Molding Application

Part B specifies details pertaining to the open molding atomized mechanical application method.

9. Resin Application:

<input type="checkbox"/> Manual:	<input type="checkbox"/> Hand	<input type="checkbox"/> Brush	<input type="checkbox"/> Roller	<input type="checkbox"/> Other (specify): _____
		<input type="checkbox"/> Air-atomization	<input type="checkbox"/> Air-assisted airless	<input type="checkbox"/> Airless
	<input type="checkbox"/> Atomized	<input type="checkbox"/> HVLP	<input type="checkbox"/> LVLP	<input type="checkbox"/> Robotic or Automated Spray
<input type="checkbox"/> Mechanical:	<input type="checkbox"/> Other (specify): _____			
	<input type="checkbox"/> Nonatomized *	<input type="checkbox"/> Flow Coater	<input type="checkbox"/> Pressure Fed Roller	
		<input type="checkbox"/> Robotic or Automated Spray	<input type="checkbox"/> Fluid Impingement Technology (FIT)	
	<input type="checkbox"/> Other (specify): _____			

10. Gel Coat Application:

<input type="checkbox"/> Manual:	<input type="checkbox"/> Hand	<input type="checkbox"/> Brush	<input type="checkbox"/> Roller	<input type="checkbox"/> Other (specify): _____
		<input type="checkbox"/> Air-atomization	<input type="checkbox"/> Air-assisted airless	<input type="checkbox"/> Airless
	<input type="checkbox"/> Atomized	<input type="checkbox"/> HVLP	<input type="checkbox"/> LVLP	<input type="checkbox"/> Robotic or Automated Spray
<input type="checkbox"/> Mechanical:	<input type="checkbox"/> Other (specify): _____			
	<input type="checkbox"/> Nonatomized *	<input type="checkbox"/> Flow Coater	<input type="checkbox"/> Pressure Fed Roller	
		<input type="checkbox"/> Robotic or Automated Spray	<input type="checkbox"/> Fluid Impingement Technology (FIT)	
	<input type="checkbox"/> Other (specify): _____			

* If you are using UEF emission factors, include documentation provided by manufacturer or user that the design of the application tool has been organic HAP emissions tested, and the test results showed that use of this application tool results in organic HAP emissions that are no greater than the organic HAP emissions predicted by the applicable nonatomized application equation(s) in the UEF Table.

Part C – Other Processes

Part C identifies any forms that may need to be submitted for other parts of the source. If the source has the listed process, submit the necessary form for the process.

Process	Use the form listed for the specified processes. Check all that apply. Check N/A if your sources does not include the listed process.		
11. Surface Coating	This form is included for surface coating (painting) operations:	<input type="checkbox"/> PI-19	<input type="checkbox"/> N/A
12. Solvent Cleaning	This form is included for solvent cleaning (degreasing) activities:	<input type="checkbox"/> PI-09	<input type="checkbox"/> N/A
13. Combustion	These forms are included for combustion (process heating) activities:	<input type="checkbox"/> PI-02A <input type="checkbox"/> PI-02B <input type="checkbox"/> PI-02F <input type="checkbox"/> PI-02G <input type="checkbox"/> PI-02H	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
14. Other (specify):	This form is included for other process:	<input type="checkbox"/>	<input type="checkbox"/> N/A

PART D: Resin and Gel Coat Data

Part D identifies data on the Resins and Gel Coats necessary to calculate emissions. Provide an MSDS for each materials used in the process. Use additional forms as necessary. **For UEF emission factors on open molding processes**, include documentation provided by manufacturer or user that the design of the application tool has been organic HAP emissions tested, and the test results showed that use of this application tool results in organic HAP emissions that are no greater than the organic HAP emissions predicted by the applicable nonatomized application equation(s) in the UEF Table.

15. Material Name	16. Emission Factors (specify value and units of measure)			17. Weight % Monomer	18. Density (lb/gal)	19. Usage (gal/part)	20. Transfer Efficiency (%)
	VOC	Styrene	Methyl Methacrylate				
RESINS							
	<input type="checkbox"/> AP42 <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other				
	<input type="checkbox"/> AP42 <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other				
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	<input type="checkbox"/> AP42 <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other				
	<input type="checkbox"/> AP42 <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other				
GELCOATS							
	<input type="checkbox"/> AP42 <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other				
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	<input type="checkbox"/> AP42 <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other				
	<input type="checkbox"/> AP42 <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other	<input type="checkbox"/> AP42 <input type="checkbox"/> UEF <input type="checkbox"/> Other				

PART E: Solvent Data

Part E provides data about the release agents, clean up solvents, and degreasers used in this process. Provide a Material Safety Data Sheet (MSDS) for each material used in the process. Space has been provided for up to six (6) solvents; use additional sheets as necessary.

21. Material Identification:						
22. Batch Identification:						
23. Manufacturer:						
24. Usage (gal/part)						
25. Material Density (lbs/gal) (D_C)						
26. Weight % Total Volatiles (water and organics) (W_V)						
27. Weight % Water (W_W)						
28. Weight % Solids (W_N)						
29. Weight % VOC (W_O)						
30. Volume % Total Volatiles (water and organics) (V_V)						
31. Volume % Water (V_W)						
32. Volume % Solids (V_N)						
33. Volume % VOC (V_O)						
34. VOC Content, less water (lbs/gal) (VOC)						
35. VOC Emission Factor	_____ <input type="checkbox"/> AP-42 <input type="checkbox"/> Other					
36. Single HAP Emission Factor (specify):	_____ <input type="checkbox"/> AP-42 <input type="checkbox"/> Other					
37. Other Pollutant Emission Factor (specify):	_____ <input type="checkbox"/> AP-42 <input type="checkbox"/> Other					

PART F: Control Technology

Part F identifies the methods used to control emissions from this process.

38. Add-On Control Technology: *Identify all control technologies used for this unit, and attach completed CE-01 (unless "none").*

- | | |
|--|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Cyclone – <i>Attach CE-03.</i> |
| <input type="checkbox"/> Baghouse / Fabric Filter – <i>Attach CE-02.</i> | <input type="checkbox"/> Absorption / Wet Collector / Scrubber – <i>Attach CE-05.</i> |
| <input type="checkbox"/> Electrostatic Precipitator – <i>Attach CE-04.</i> | <input type="checkbox"/> Adsorber – <i>Attach CE-07.</i> |
| <input type="checkbox"/> Oxidizer / Incinerator – <i>Attach CE-06.</i> | <input type="checkbox"/> NO _x Reduction – <i>Attach CE-09.</i> |
| <input type="checkbox"/> Condenser – <i>Attach CE-08.</i> | <input type="checkbox"/> Waterwash – <i>Attach CE-10.</i> |
| <input type="checkbox"/> Dry Filters – <i>Attach CE-10.</i> | |
| <input type="checkbox"/> Other (<i>specify</i>): | – <i>Attach CE-10.</i> |

39. Control Techniques: *Identify all control techniques used for this process.*

- | | |
|---|---|
| <input type="checkbox"/> None | |
| <input type="checkbox"/> Vapor Suppressed Resin | Specify the Vapor Suppressant Effectiveness Factor (<i>as determined using the test method from Appendix A of 40 CFR 63 Subpart WWWW</i>):
*Attach a copy of the test results to this form. |
| <input type="checkbox"/> Vacuum Bagging (<i>specify</i>): | <input type="checkbox"/> Covered & Cured Before Rollout <input type="checkbox"/> Covered & Cured After Rollout |
| <input type="checkbox"/> Other (<i>specify</i>): | |

40. Process Limitations / Additional Information: *Identify any acceptable process limitations. Attach additional information if necessary.*

PART G: Federal Rule Applicability

Part G identifies any federal rules that apply to the process.

41. Is a New Source Performance Standard (NSPS) applicable to this source? Yes No
Attach a completed FED-01 for each rule that applies.

40 CFR Part 60, Subpart _____ (*Specify*):

42. Is a National Emission Standard for Hazardous Air Pollutants (NESHAP) applicable to this source? Yes No
Attach a completed FED-01 for each rule that applies.

- | | |
|--|--|
| <input type="checkbox"/> 40 CFR Part 63, Subpart VVVV | Boat Manufacturing |
| <input type="checkbox"/> 40 CFR Part 63, Subpart WWWW | Reinforced Plastic Composites Production |
| <input type="checkbox"/> 40 CFR Part 63, Subpart _____ (<i>Specify</i>): | |

43. Non-Applicability Determination: Provide an explanation if the process unit appears subject to a rule (based on the rule title or the source category), but the rule will not apply.

PART H: State Rule Applicability

Part H clarifies applicability of the state rule regarding styrene emissions (326 IAC 20-25).

<p>44. Is your source (as a whole, not just the unit listed on list form) a major source of HAPs? (If no, your source is not subject to 326 IAC 20-25.)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>45. Does your source manufacture reinforced plastic parts, products, or watercraft? (If no, your source is not subject to 326 IAC 20-25.)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>46. Does your source have an emission unit where resins and/or gel coats that contain styrene are applied and cured using the open molding process? (If no, your source is not subject to 326 IAC 20-25.)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>47. Is this emission unit subject to 326 IAC 20-48 (NESHAP 40 CFR Part 63, Subpart VVVV) concerning HAP emission standards for boat manufacturing? (If Yes, this source is exempt from 326 IAC 20-25.)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>48. 326 IAC 20-56 Applicability (NESHAP 40 CFR Part 63, Subpart WWWW):</p>	
<p>a. Is your source subject to 326 IAC 20-56 (NESHAP WWWW) concerning HAP emission standards for reinforced plastic composites production?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>b. Was your source existing on or before August 2, 2001, as a major source of HAPs? (If you answered Yes to both questions, your source is exempt from 326 IAC 20-25.)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>49. Existing Source: Does your source have actual emissions of styrene equal to or greater than three (3) tons per year. (If Yes, your source may be subject to 326 IAC 20-25.) (If No, attach the last two years of styrene emissions data including a summary, the calculation method, and the raw data used.)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not an Existing Source</p>
<p>50. New Source or Modification: Do you project your source have actual emissions of styrene equal to or greater than three (3) tons per year. (If Yes, your source may be subject to 326 IAC 20-25.) (If No, attach the projected styrene emissions data including a summary, the calculation method, and the raw data used.)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not a New or Modified Source</p>

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