

FG{ID}
FLEXIBLE GROUP CONDITIONS
40 CFR Part 63, Subpart WWWW – Reinforced Plastic Composites
Production covers major sources of HAPs

Red text identifies options. Select the option that applies to the source and change the text to black. Delete red text that does not apply and renumber conditions if necessary.

Blue text is guidance or notes on the use of the template. Delete all blue text prior to issuing the final permit or submitting it with a permit application. Read through all conditions. If the permittee has control equipment, use all the conditions in this template, selecting the appropriate control type for the tables. If there is currently no control or no plans to add control, eliminate the conditions that reference use of control (red conditions) and renumber appropriately.

If this template is being used for an ROP Reopening or Renewal, and the MACT conditions were established in a PTI, the appropriate footnotes which reference enforceability must be added to each applicable condition in the template.

This template is for the following as it applies to the source that does not have emission controls. A reinforced plastic composites production facility is a new affected source if it meets all the criteria in 40 CFR 63.5795(a)(1) and (2).

- (1) You commence construction of the source after August 2, 2001.**
- (2) You commence construction, and no other reinforced plastic composites production source exists at that site.**

OR:

An existing affected source which is any affected source that is not a new affected source (40 CFR 63.5795(b)).

AND:

40 CFR 63.5805(b) or (c) – An existing or new facility that emits less than 100 tpy of HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing must meet the organic HAP emissions limits in Table 3 to this subpart and the work practice standards in Table 4 to this subpart that apply.

DESCRIPTION

Each **existing / new / reconstructed (choose one)** affected source at reinforced plastic composites production facilities as identified in 40 CFR Part 63, Subpart WWWW, 40 CFR 63.5785 and 40 CFR 63.5790 that emit less than 100 tpy of HAP. Reinforced plastic composites production includes the following operations: open molding, **closed molding, centrifugal casting, continuous lamination, continuous casting, polymer casting, pultrusion, sheet molding compound (SMC) manufacturing, bulk molding compound (BMC) manufacturing,** mixing, cleaning of equipment used in reinforced plastic composites manufacture, HAP-containing materials storage, and repair operations associated with the production of plastic composites. **{May add specifics for the affected EU(s).}**

Emission Unit(s): {Enter Emission Units}

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Select all appropriate pollutant limits for operations done at the source. Renumber items in table and subsequent conditions. {Specific limits for centrifugal casting, pultrusion, and continuous lamination/casting not included. Can be added upon request.}

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/Testing Method	Underlying Applicable Requirements
1. Organic HAP from Open Molding – corrosion-resistant and/or high strength (CR/HS)	113 lb/ton	12-month rolling average or as applied	Mechanical Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.1.a
2. Organic HAP from Open Molding – corrosion-resistant and/or high strength (CR/HS)	171 lb/ton	12-month rolling average or as applied	Filament Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.1.b
3. Organic HAP from Open Molding – corrosion-resistant and/or high strength (CR/HS)	123 lb/ton	12-month rolling average or as applied	Manual Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.1.c
4. Organic HAP from Open Molding – non-CR/HS	88 lb/ton	12-month rolling average or as applied	Mechanical Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.2.a
5. Organic HAP from Open Molding – non-CR/HS	188 lb/ton	12-month rolling average or as applied	Filament Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.2.b
6. Organic HAP from Open Molding – non-CR/HS	87 lb/ton	12-month rolling average or as applied	Manual Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.2.c
7. Organic HAP from Open Molding – tooling	254 lb/ton	12-month rolling average or as applied	Mechanical Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.3.a

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/Testing Method	Underlying Applicable Requirements
8. Organic HAP from Open Molding – tooling	157 lb/ton	12-month rolling average or as applied	Manual Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.3.b
9. Organic HAP from Open Molding – low-flame spread/low-smoke products	497 lb/ton	12-month rolling average or as applied	Mechanical Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.4.a
10. Organic HAP from Open Molding – low-flame spread/low-smoke products	270 lb/ton	12-month rolling average or as applied	Filament Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.4.b
11. Organic HAP from Open Molding – low-flame spread/low-smoke products	238 lb/ton	12-month rolling average or as applied	Manual Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.4.c
12. Organic HAP from Open Molding – shrinkage-controlled resins	354 lb/ton	12-month rolling average or as applied	Mechanical Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.5.a
13. Organic HAP from Open Molding – shrinkage-controlled resins	215 lb/ton	12-month rolling average or as applied	Filament Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.5.b
14. Organic HAP from Open Molding – shrinkage-controlled resins	180 lb/ton	12-month rolling average or as applied	Manual Resin Application portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.5.c
15. Organic HAP from Open Molding – gel coat	440 lb/ton	12-month rolling average or as applied	Tooling Gel Coating portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.6.a
16. Organic HAP from Open Molding – gel coat	267 lb/ton	12-month rolling average or as applied	White/off White Pigmented Gel Coating portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.6.b

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/Testing Method	Underlying Applicable Requirements
17. Organic HAP from Open Molding – gel coat	377 lb/ton	12-month rolling average or as applied	All Other Pigmented Gel Coating portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.6.c
18. Organic HAP from Open Molding – gel coat	605 lb/ton	12-month rolling average or as applied	CR/HS or High-Performance Gel Coat portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.6.d
19. Organic HAP from Open Molding – gel coat	854 lb/ton	12-month rolling average or as applied	Fire Retardant Gel Coat portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.6.e
20. Organic HAP from Open Molding – gel coat	522 lb/ton	12-month rolling average or as applied	Clear Production Gel Coat portion of FG{ID}	SC V.1, SC VI.2	40 CFR 63.5835(a), 40 CFR Part 63, Subpart WWWW, Table 3.6.f

21. The permittee must use one or a combination of the following methods to meet the standards for open molding operations in Table 3 of 40 CFR Part 63, Subpart WWWW:
- Demonstrate that an individual resin or gel coat, as applied, meets the applicable emission limit in Table 3 of 40 CFR Part 63, Subpart WWWW. **(40 CFR 63.5810(a))**
 - Demonstrate that, on average, the facility meets the individual organic HAP emissions limits for each unique combination of operation type and resin application method or gel coat type shown in Table 3 of 40 CFR Part 63, Subpart WWWW that applies to the facility. **(40 CFR 63.5810(b))**
 - Demonstrate compliance with a weighted average emission limit. Demonstrate each month that the permittee meets each weighted average of the organic HAP emissions limits in Table 3 of 40 CFR Part 63, Subpart WWWW that apply to the weighted average organic HAP emissions limit for all open molding operations. **(40 CFR 63.5810(c))**
 - Meet the organic HAP emissions limit for one application method and use the same resin(s) for all application methods of that resin type. This option is limited to resins of the same type. The resin types for which this option may be used are non-corrosion-resistant, corrosion-resistant and/or high strength, and tooling. **(40 CFR 63.5810(d))**

The permittee may switch between the compliance options in (a) through (d). When changing to an option based on a 12-month rolling average, the permittee must base the average on the previous 12 months of data calculated using the compliance option changing to, unless previously used an option that did not require the permittee to maintain records of resin or gel coat. In this case, the permittee must immediately begin collecting resin and gel coat use data and demonstrate compliance 12 months after changing options. **(40 CFR 63.5810)**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. **(40 CFR 63.5835(c))**
2. The permittee must be in compliance at all times with the work practice standards in Table 4 of 40 CFR Part 63, Subpart WWWW as follows: **(40 CFR 63.5805(c), 40 CFR 63.5835(a))**
 - a. For closed molding operation using compression/injection molding, uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting. **(40 CFR Part 63, Subpart WWWW, Table 4.1)**
 - b. The permittee shall not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin. **(40 CFR Part 63, Subpart WWWW, Table 4.2)**
 - c. For each HAP-containing materials storage operation, the permittee must keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP containing materials storage tanks may be vented as necessary for safety. **(40 CFR Part 63, Subpart WWWW, Table 4.3)**
 - d. For each mixing operation, the permittee must use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation. **(40 CFR Part 63, Subpart WWWW, Table 4.6)**
 - e. For each mixing operation, the permittee must close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety. **(40 CFR Part 63, Subpart WWWW, Table 4.7)**
 - f. For each mixing operation, the permittee must keep the mixer covers closed while actual mixing is occurring, except when adding materials or changing covers to the mixing vessels. **(40 CFR Part 63, Subpart WWWW, Table 4.8)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

Permit staff – [Change above UAR to Rule 201\(3\) if using in a PTI.](#)

1. In order to determine the organic HAP content of resins and gel coats, the permittee may rely on information provided by the material manufacturer, such as manufacturer's formulation data and material safety data sheets (MSDS), using the procedures specified in (a) through (c), as applicable. **(40 CFR 63.5797)**
 - a. Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for Occupational Safety and Health Administration-defined carcinogens, as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other organic HAP compounds. **(40 CFR 63.5797(a))**
 - b. If the organic HAP content is provided by the material supplier or manufacturer as a range, the permittee must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content, such as an analysis of the material by EPA Method 311 of Appendix A to 40 CFR Part 63, exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, then the permittee must use the measured organic HAP content to determine compliance. **(40 CFR 63.5797(b))**
 - c. If the organic HAP content is provided as a single value, the permittee may use that value to determine compliance. If a separate measurement of the total organic HAP content is made and is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then the permittee still may use the provided value to demonstrate compliance. If the

measured total organic HAP content exceeds the provided value by 2 percentage points or more, then the permittee must use the measured organic HAP content to determine compliance. **(40 CFR 63.5797(c))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

Permit staff – Change above UAR to Rule 201(3) if using a PTI.

1. The permittee must monitor and collect data as specified in (a) through (d): **(40 CFR 63.5895(b))**
 - a. Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times that the affected source is operating. **(40 CFR 63.5895(b)(1))**
 - b. The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system. **(40 CFR 63.5895(b)(2))**
 - c. At all times, the permittee must maintain necessary parts for routine repairs of the monitoring equipment. **(40 CFR 63.5895(b)(3))**
 - d. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring equipment to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 63.5895(b)(4))**
2. The permittee must monitor and collect data to demonstrate continuous compliance as follows: **(40 CFR 63.5895, 40 CFR 63.5900)**
 - a. The permittee must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if meeting any organic HAP emissions limits based on an organic HAP emissions limit in Table 3 of 40 CFR Part 63, Subpart WWWW. The permittee must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if meeting any organic HAP content limits in Table 7 of 40 CFR Part 63, Subpart WWWW if averaging organic HAP contents. Resin use records may be based on purchase records if the permittee can reasonably estimate how the resin is applied. The organic HAP content records may be based on MSDS or on resin specifications supplied by the resin supplier. **(40 CFR 63.5895(c))**
 - b. Compliance with organic HAP emissions limits is demonstrated by maintaining an organic HAP emissions factor value less than or equal to the appropriate organic HAP emissions limit listed in Table 3 of 40 CFR Part 63, Subpart WWWW, on a 12-month rolling average, and/or by including in each compliance report a statement that individual resins and gel coats, as applied, meet the appropriate organic HAP emissions limits, as discussed in 40 CFR 63.5895(d). **(40 CFR 63.5900(a)(2))**
 - c. Compliance with organic HAP content limits in Table 7 of 40 CFR Part 63, Subpart WWWW is demonstrated by maintaining an average organic HAP content value less than or equal to the appropriate organic HAP contents listed in Table 7 of 40 CFR Part 63, Subpart WWWW, on a 12-month rolling average, and/or by including in each compliance report a statement that resins and gel coats individually meet the appropriate organic HAP content limits in Table 7 of 40 CFR Part 63, Subpart WWWW, as discussed in 40 CFR 63.5895(d). **(40 CFR 63.5900(a)(3))**
 - d. The necessary calculations must be completed within 30 days after the end of each month. The permittee may switch between the compliance options in 40 CFR 63.5810(a) through (d). When change to an option based on a 12-month rolling average, base the average on the previous 12 months of data calculated using the compliance option changing to, unless previously using an option that did not require records of resin and gel coat use. In this case, the permittee must immediately begin collecting resin and gel coat use data and demonstrate compliance 12 months after changing options. **(40 CFR 63.5810)**
3. The permittee must keep the following records: **(40 CFR 63.5915)**
 - a. A copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart WWWW, including all documentation supporting any Initial Notification or Notification of Compliance Status. **(40 CFR 63.5915(a)(1))**

- b. Records of performance tests, design, and performance evaluations as required in 40 CFR 63.10(b)(2). **(40 CFR 63.5915(a)(3))**
 - c. All data, assumptions, and calculations used to determine organic HAP emissions factors or average organic HAP contents for operations listed in Tables 3 and 7 of 40 CFR Part 63, Subpart WWWW. **(40 CFR 63.5915(c))**
 - d. A certified statement that the permittee is in compliance with the work practice requirements in Table 4 of 40 CFR Part 63, Subpart WWWW, as applicable. **(40 CFR 63.5915(d))**
- 4. The permittee must maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection according to 40 CFR 63.10(b)(1) and keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.5920(a) and (b))**
 - 5. The permittee must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The records may be kept offsite for the remaining 3 years. **(40 CFR 63.5920(c))**
 - 6. The permittee may keep records in hard copy or computer readable form including, but not limited to, paper, microfilm, computer floppy disk, magnetic tape, or microfiche. Any records required to be maintained and are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to the AQD or the EPA as part of an on-site compliance evaluation. **(40 CFR 63.5920(d) and (e))**

VII. REPORTING

Permit Staff – SC VII.1, 2, and 3, references to Rule 213 are ROP only. Remove before putting into a PTI. Renumber as appropriate.

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- 4. The permittee must submit all of the notifications in Table 13 of 40 CFR Part 63, Subpart WWWW that apply by the dates specified in Table 13 of 40 CFR Part 63, Subpart WWWW. **(40 CFR 63.5905(a))**
- 5. The permittee must submit semiannual compliance reports. The compliance report must contain the following information: **(40 CFR 63.5910(b) and (c))**
 - a. Company name and address. **(40 CFR 63.5910(c)(1))**
 - b. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.5910(c)(2))**
 - c. Date of the report and beginning and ending dates of the reporting period. **(40 CFR 63.5910(c)(3))**
 - d. If there are no deviations from any organic HAP emissions limitations (emissions limit and operating limit) that apply, and there are no deviations from the requirements for work practice standards in Table 4 of 40 CFR Part 63, Subpart WWWW, a statement that there were no deviations from the organic HAP emissions limitations or work practice standards during the reporting period. **(40 CFR 63.5910(c)(5))**
 - e. For each deviation from an organic HAP emissions limitation or operating limit and for each deviation from the requirements for work practice standards that occurs at an affected source, the compliance report must contain the information in (i) through (ii). **(40 CFR 63.5910(d))**
 - i. The total operating time of each affected source during the reporting period. **(40 CFR 63.5910(d)(1))**
 - ii. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. **(40 CFR 63.5910(d)(2))**

6. The permittee must submit semiannual compliance reports to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The permittee must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>). The report must be submitted by the deadline specified in 40 CFR Part 63, Subpart WWWW. **(40 CFR 63.5912(d))**

See Appendix 8 - Permit Staff: Remove if PTI since this is ROP only.

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and WWWW for Reinforced Plastic Composites Production. **(40 CFR Part 63, Subparts A and WWWW)**

[Remove these footnotes if no PTIs are associated with this flexible group.](#)

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).