

3745-21-24

**Flat wood paneling coatings.**

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (JJ) of rule 3745-21-01 of the Administrative Code titled "Reference to materials."]

**(A) Applicability.**

(1) The requirements of this rule shall apply to any facility that meets both of the following criteria:

- (a) The facility is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county.
- (b) The facility has total actual VOC emissions from all flat wood paneling coating lines that are equal to or greater than 15.0 pounds of VOC emissions per day, before the application of capture and control devices.

**(B) Definitions.**

The definitions applicable to this rule are contained in ~~paragraph~~ paragraphs (A), (B), and (FF) of rule 3745-21-01 of the Administrative Code.

**(C) VOC emission control requirements.****(1) VOC content limitations.**

The owner or operator of a facility that is subject to this rule shall not apply any flat wood paneling coating that exceeds the VOC content limitations specified in the table of this rule:

Table - VOC Content Limitations

Categories	VOC Limitations ( <del>lbs</del> <u>pounds</u> per gallon, excluding water and exempt solvents)	VOC Limitations ( <del>lbs</del> <u>pounds</u> per gallon of solids)
Printed interior panels made of hardwood, plywood, or thin particleboard.	2.1	2.9
Natural finish hardwood	2.1	2.9

plywood panels.		
Class 2 finishes on hardboard panels.	2.1	2.9
Tileboard.	2.1	2.9
Exterior siding.	2.1	2.9

- (2) As an alternative to the VOC emission limitations specified in the table of this rule, the owner or operator of a facility may choose to vent all VOC emissions to a control device with a minimum overall control efficiency of ninety per cent, by weight.

(D) Application equipment requirements.

~~A person~~ The owner or operator of a ~~or~~ facility shall not apply coatings to wood products subject to the provisions of this rule unless the coating is applied with properly operating equipment, in accordance with proper operating procedures, and by the use of one of the following methods:

- (1) Electrostatic application;
- (2) High volume, low pressure (HVLP) spray;
- (3) Hand roller;
- (4) Flow coat;
- (5) Roll coater;
- (6) Dip coat;
- (7) Paint brush; or
- (8) Detailing or touch-up guns.

(E) Work practice standards.

~~Any person or~~ The owner or operator of a facility using VOC-containing materials in any flat wood paneling coating line shall ensure that VOC emissions are minimized by incorporating the following procedures:

- (1) Store all VOC coatings, thinners, and cleaning materials in closed containers;
- (2) Minimize spills of VOC containing coatings and thinners, and cleanup any spills immediately;
- (3) Convey any coating, thinners, and cleaning materials in closed containers or pipes; and
- (4) Keep mixing vessels that contain VOC coatings or other materials closed except when specifically in use.
- (5) Minimize emissions of VOC during cleaning of storage, mixing and conveying equipment.

(F) Record keeping and reporting.

- (1) The owner or operator of a facility that is subject to this rule shall meet the record keeping and reporting requirements, as applicable, in paragraph (B)(3) of rule 3745-21-09 of the Administrative Code.

(G) Compliance test methods for coatings.

The VOC content and solids content of a coating shall be determined by the owner or operator in accordance with paragraph (B) of rule 3745-21-10 of the Administrative Code, wherein formulation data or USEPA Method 24 procedures (which include various ASTM measurement methods) may be employed.

(H) Compliance tests for VOC emission control systems.

- (1) For a VOC emission control system used to comply with paragraph (C)(2) of this rule, the owner or operator shall conduct a compliance test to determine the capture efficiency of the capture system, the control efficiency of the control device (or each control device if a combination of control devices is employed), and the overall control efficiency of the VOC emission control system in accordance with paragraph (C) of rule 3745-21-10 of the Administrative Code wherein USEPA Method 25 or 25A shall be used for determining the concentration of VOC in a gas stream.
- (2) During the compliance test described in paragraph (H)(1) of this rule that demonstrates compliance, the owner or operator shall establish the operating limits (operating parameter values) for the monitoring devices as follows:
  - (a) If the control device is a thermal oxidizer, establish the operating limit as follows:

- (i) Monitor and record the combustion temperature either in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs at least once every fifteen minutes during each of the three runs of the compliance test.
  - (ii) Calculate and record the average combustion temperature maintained during the compliance test. This average combustion temperature is the minimum operating limit for the thermal oxidizer.
- (b) If the control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (H)(2)(b)(i) and (H)(2)(b)(ii) or paragraphs (H)(2)(b)(iii) and (H)(2)(b)(iv) of this rule.
  - (i) Monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every fifteen minutes during each of the three test runs comprising a compliance test.
  - (ii) Calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the compliance test. These are the minimum operating limits for the catalytic oxidizer.
  - (iii) Monitor and record the temperature just before the catalyst bed at least once every fifteen minutes during each of the three test runs of the compliance test. Use this recorded temperature data to calculate and record the average temperature before the catalyst bed during the performance test. This is the minimum operating limit for the catalytic oxidizer.
  - (iv) Develop and implement an inspection and maintenance plan for the catalytic oxidizer(s) for which the owner or operator elects to monitor according to paragraph (H)(2)(b)(iii) of this rule. The plan must address, at a minimum, the elements specified in paragraphs (H)(2)(b)(iv)(a) to (H)(2)(b)(iv)(c) of this rule.
    - (a) Conduct an annual sampling and analysis of the catalyst activity (i.e., conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, the owner or operator shall replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

- (b) Conduct monthly external inspection of the catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.
- (c) Conduct annual internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, the owner or operator shall replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst, then the owner or operator shall conduct a new compliance test to determine the control efficiency of the catalytic oxidizer according to paragraph (G)(1) of this rule. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new compliance test to determine the control efficiency of the catalytic oxidizer is not required and the previously established operating limits for that catalytic oxidizer may be used.
- (c) If the control device is a regenerative carbon adsorber, establish the operating limits as follows:

  - (i) Monitor and record the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the compliance test.
  - (ii) The operating limits for the regenerative carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.
- (d) If the control device includes a concentrator, establish operating limits for the concentrator as follows:

  - (i) Monitor and record the desorption concentrate stream gas temperature at least once every fifteen minutes during each of the three runs of the compliance test.
  - (ii) Use the data collected during the compliance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

- (iii) Monitor and record the pressure drop of the dilute stream across the concentrator at least once every fifteen minutes during each of the three runs of the performance test.
    - (iv) Use the data collected during the compliance test to calculate and record the average pressure drop. This is the minimum operating limit for the pressure drop of the dilute stream across the concentrator.
  - (e) If the capture system is a permanent total enclosure, the operating limit is either one of the following, based on the criteria of a permanent total enclosure.
    - (i) The pressure drop across the enclosure shall be at least 0.007 inch of water.
    - (ii) The average facial velocity of air through all natural draft openings shall be at least two hundred feet per minute.
  - (f) If the capture system is a not a permanent total enclosure, establish an operating limit for each separate capture device in the capture system as follows:
    - (i) Monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in the emission capture system at least once every fifteen minutes during each of the three test runs of the compliance test for capture efficiency at a point in the duct between the capture device and the control device inlet.
    - (ii) Calculate and record the average gas volumetric flow rate or average duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or average duct static pressure is the minimum operating limit for that specific capture device.

(I) Compliance dates.

- (1) The owner or operator of a facility that is subject to this rule shall comply with the requirements of this rule no later than the following dates:
  - (a) For any flat wood paneling coating line located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county for which installation commenced before April 2, 2009, the compliance date of the flat wood paneling coating line is April 2, 2010 or date of initial startup of the operation, whichever is later.

(b) For any flat wood paneling coating line located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county for which installation commenced on or after April 2, 2009, the compliance date of the flat wood paneling coating line is the initial startup date of the flat wood paneling coating line.

(J) Requirements on applicability notification, compliance certification, and permit application.

(1) The owner or operator of a facility that is subject to this rule, is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county, and that has a flat wood paneling coating line with an initial startup date before April 2, 2009 shall notify the Ohio environmental protection agency district office or local air agency in writing that the flat wood paneling coating line is subject to this rule. The notification, which shall be submitted not later than June 1, 2009 (or within sixty days after the flat wood paneling coating line becomes subject to this rule), shall provide the information specified in paragraph (J)(3) of this rule.

(2) The owner or operator of a facility that is subject to this rule, is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county, and that has a flat wood panel coating line with an initial startup date on or after April 2, 2009 shall notify the Ohio environmental protection agency district office or local air agency in writing that the flat wood paneling coating line is subject to this rule. The notification, which shall be submitted not later than either the date of initial startup of the flat wood paneling coating line or by June 1, 2009, whichever is later, and shall provide the information listed under paragraph (J)(3) of this rule. The application for an installation permit under rule 3745-31-02 of the Administrative Code may be used to fulfill the notification requirements of this paragraph.

(3) The notification required in paragraphs (J)(1) to (J)(2) of this rule shall include the following information:

(a) Name and address of the owner or operator.

(b) Address (i.e., physical location) of the affected facility.

(c) Description of the solvent cleaning operation and Ohio environmental protection agency emissions unit number, if assigned.

(d) Identification of the VOC emission requirement, the means of compliance and the compliance date for the flat wood paneling coating operation.

(e) Regarding an air pollution permit for the flat wood paneling coating operation, whichever of the following is applicable:

- (i) Submission of an application for an operating permit, a permit modification, or an operating permit renewal in accordance with rule 3745-31-02 of the Administrative Code; or
- (ii) Submission of a statement of intent to submit an application for a Title V permit or modification of a Title V permit in accordance with paragraph (B) of rule 3745-77-02 or rule 3745-77-08 of the Administrative Code, respectively.

(K) Requirements for an owner or operator of a flat wood paneling coating line that determines they are not subject to the requirements of this rule.

- (1) When establishing that the facility's total actual VOC emissions from all of the flat wood paneling coating lines (before the application of capture systems and control devices) are less than 15.0 pounds of VOCs per day, the owner or operator shall maintain the following daily records:
  - (a) The total gallons of each flat wood paneling coating employed;
  - (b) The VOC content of each flat wood paneling coating employed; and
  - (c) The total daily VOC emissions (summation of gallons x VOC content (in pounds per gallon) for all flat wood paneling coating employed).



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CERTIFIED ELECTRONICALLY

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Certification

05/02/2011

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Date

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