

## Chapter 129 -- Standards for Sources

### SOURCES OF VOCs

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#### § 129.52c. Control of VOC emissions from flat wood paneling surface coating processes.

(a) *Applicability.* Except as specified in paragraphs (1)—(3), this section applies to the owner and operator of a flat wood paneling surface coating process if the total actual VOC emissions from all flat wood paneling surface coating operations listed in Table I (relating to emission limits of VOCs for flat wood paneling surface coatings), including related cleaning activities, at the facility are equal to or greater than 15 pounds (6.8 kilograms) per day, before consideration of controls. This section does not apply to the following:

(1) A field-applied coating process. Field-applied coatings are regulated under Chapter 130, Subchapter C (relating to architectural and industrial maintenance coatings).

(2) A coating process regulated under § § 129.101—129.107 (relating to wood furniture manufacturing operations).

(3) A coating process regulated under § § 129.52(f) and 129.52, Table I, Category 11 (relating to surface coating processes; and wood furniture manufacturing operations).

(b) *Existing RACT permit.* The requirements of this section supersede the requirements of a RACT permit issued to the owner or operator of a source subject to subsection (a) prior to January 1, 2012, under § § 129.91—129.95 (relating to stationary sources of NO<sub>x</sub> and VOCs) to control, reduce or minimize VOCs from a flat wood paneling surface coating process, except to the extent the RACT permit contains more stringent requirements.

(c) *Emission limits.* Beginning January 1, 2012, a person subject to this section may not cause or permit the emission into the outdoor atmosphere of VOCs from a flat wood paneling coating process unless one of the following limitations is met:

(1) The VOC content of each as applied coating is equal to or less than the limit specified in Table I.

(i) The VOC content of each as applied coating, expressed in units of weight of VOC per volume of coating solids, shall be calculated as follows:

$$\text{VOC} = (W_o)(D_c)/V_n$$

Where:

VOC = VOC content in lb VOC/gal of coating solids.

$W_o$  = Weight percent of VOC ( $W_v - W_w - W_{ex}$ ).

$W_v$  = Weight percent of total volatiles (100%-weight percent solids).

$W_w$  = Weight percent of water.

$W_{ex}$  = Weight percent of exempt solvent(s).

$D_c$  = Density of coating, lb/gal, at 25° C.

$V_n$  = Volume percent of solids of the as applied coating.

(ii) The VOC content limits in Table I may be met by calculating a weighted average of the VOC content of all coatings used on a single flat wood paneling surface coating process line each day. The daily weighted average shall be calculated using the following equation:

$$VOC_w = \frac{\sum_{i=1}^n C_i V_i}{V_t}$$

Where:

$VOC_w$  = The daily weighted average VOC content, as applied, of all coatings used on a single flat wood paneling surface coating process line, in lb VOC/gal of coating solids.

$n$  = The number of different coatings used each day on the single flat wood paneling surface coating process line.

$V_i$  = The volume solids for each coating, as applied, used each day on the single flat wood paneling surface coating process line, in gallons.

$C_i$  = The VOC content of each coating, as applied, used each day on the single flat wood paneling surface coating process line, in lb VOC/gal coating solids.

$V_t$  = The total volume of solids for all coatings combined, as applied, used each day on the single flat wood paneling surface coating process line, in gallons.

(iii) Sampling and testing shall be done in accordance with the procedures and test methods specified in Chapter 139 (relating to sampling and testing).

(2) The overall weight of VOCs emitted to the atmosphere is reduced through the use of oxidation or solvent recovery or another method that is acceptable under § 129.51(a) (relating to general). The overall efficiency of a control system, as determined by the test methods and procedures specified in Chapter 139, may be no less than 90% or may be no less than the equivalent efficiency as calculated by the following equation, whichever is less stringent:

$$O = (1 - E/V) \times 100$$

Where:

V = The VOC content of the as applied coating, in lb VOC/gal of coating solids.

E = The Table I limit in lb VOC/gal of coating solids.

O = The overall required control efficiency.

(d) *Compliance monitoring procedures.* The owner or operator of a facility subject to this section shall maintain records sufficient to demonstrate compliance with this section. The owner or operator shall maintain daily records of:

(1) The following parameters for each coating, thinner, other component or cleaning solvent as supplied:

(i) Name and identification number of the coating, thinner, other component or cleaning solvent.

(ii) Volume used.

(iii) Mix ratio.

(iv) Density or specific gravity.

(v) Weight percent of total volatiles, water, solids and exempt solvents.

(vi) Volume percent of solids for each coating used in the flat wood paneling coating process.

(vii) VOC content.

(2) The VOC content of each as applied coating or cleaning solvent.

(e) *Recordkeeping and reporting requirements.* The records required under subsection (d) shall be:

(1) Maintained for 2 years, unless a longer period is required under § 127.511(b)(2) (relating to monitoring and related recordkeeping and reporting requirements).

(2) Submitted to the Department upon receipt of a written request.

(f) *Coating application methods.* A person subject to this section may not cause or permit the emission into the outdoor atmosphere of VOCs from a flat wood paneling surface coating process unless the coatings are applied using one or more of the following coating application methods:

- (1) Offset rotogravure coating.
- (2) Curtain coating.
- (3) Direct roll coating.
- (4) Reverse roll coating.
- (5) Hand brush or hand roller coating.
- (6) High volume-low pressure (HVL) spray coating.
- (7) Airless spray coating.
- (8) Air-assisted airless spray coating.
- (9) Electrostatic coating.
- (10) Other coating application method, if approved in writing by the Department prior to use.

(i) The coating application method must be capable of achieving a transfer efficiency equivalent to or better than that achieved by a method listed in paragraphs (1)—(9).

(ii) The request for approval must be submitted in writing.

(g) *Exempt coatings.* The VOC coating content standards in Table I do not apply to a coating used exclusively for determining product quality and commercial acceptance and other small quantity coatings, if the coating meets the following criteria:

(1) The quantity of coating used does not exceed 50 gallons per year for a single coating and a total of 200 gallons per year for all coatings combined for the facility.

(2) The owner or operator of the facility requests, in writing, and the Department approves, in writing, the exemption prior to use of the coating.

(h) *Work practice requirements for coating-related activities.* The owner or operator of a flat wood paneling surface coating process subject to this section shall comply with the following work practices for coating-related activities:

(1) Store all VOC-containing coatings, thinners and coating-related waste materials in closed containers.

(2) Minimize spills of VOC-containing coatings, thinners and coating-related waste materials and clean up spills immediately.

(3) Convey VOC-containing coatings, thinners and coating-related waste materials from one location to another in closed containers or pipes.

(4) Ensure that mixing and storage containers used for VOC-containing coatings, thinners and coating-related waste materials are kept closed at all times, except when depositing or removing these materials.

(i) *Work practice requirements for cleaning materials.* The owner or operator of a flat wood paneling surface coating process subject to this section shall comply with the following work practices for cleaning materials:

(1) Store all VOC-containing cleaning materials, waste cleaning materials and used shop towels in closed containers.

(2) Minimize spills of VOC-containing cleaning materials and waste cleaning materials and clean up spills immediately.

(3) Convey VOC-containing cleaning materials and waste cleaning materials from one location to another in closed containers or pipes.

(4) Ensure that mixing vessels and storage containers used for VOC-containing cleaning materials and waste cleaning materials are kept closed at all times, except when depositing or removing these materials.

(5) Minimize VOC emissions during cleaning of storage, mixing and conveying equipment.

**Table I**

**Emission Limits of VOCs for  
Flat Wood Paneling Surface Coatings**

**Weight of VOC per Volume  
of Coating Solids, as Applied**

<i>Surface Coatings, Inks or Adhesives Applied to the Following Flat Wood Paneling Categories</i>	<i>lbs VOC per gallon coating solids</i>	<i>grams VOC per liter coating solids</i>
Printed interior panels made of hardwood plywood or thin	2.9	350

particleboard		
Natural-finish hardwood plywood panels	2.9	350
Class II finishes on hardboard panels	2.9	350
Tileboard	2.9	350
Exterior siding	2.9	350

### **Authority**

The provisions of this § 129.52c issued under section 5 of the Air Pollution Control Act (35 P. S. § 4005).

### **Source**

The provisions of this § 129.52c adopted December 17, 2010, effective December 18, 2010, 40 Pa.B. 7224.

### **Cross References**

This section cited in 25 Pa. Code § 129.51 (relating to general).