

COMMONWEALTH OF VIRGINIA
STATE AIR POLLUTION CONTROL BOARD
REGULATIONS FOR THE CONTROL AND ABATEMENT OF AIR POLLUTION

9 VAC 5 CHAPTER 40.
EXISTING STATIONARY SOURCES.

PART II.
Emission Standards.

ARTICLE 31.
Emission Standards For Paper and Fabric Coating
Application Systems (Rule 4-31).

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9 VAC 5-40-4310. Applicability and designation of affected facility.

A. Except as provided in subsections C and D of this section, the affected facility to which the provisions of this article apply is each paper or fabric coating application system or both.

B. The provisions of this article apply only to sources of volatile organic compounds in volatile organic compound emissions control areas designated in 9 VAC 5-20-206.

C. Exempted from the provisions of this article are coating plants whose emissions of volatile organic compounds are not more than 2.7 tons per year, 15 pounds per day and three pounds per hour, based on the actual emissions rate. All volatile organic compound emissions from purging or washing solvents shall be considered in applying the exemption levels specified in this subsection.

D. The provisions of this article do not apply to coating application systems used exclusively for determination of product quality and commercial acceptance provided:

1. The operation is not an integral part of the production process;
2. The emissions from all product quality coating application systems do not exceed 400 pounds in any 30 day period; and
3. The exemption is approved by the board.

9 VAC 5-40-4320. Definitions.

A. For the purpose of these regulations and subsequent amendments or any orders issued by the board, the words or terms shall have the meaning given them in subsection C of this section.

B. As used in this article, all terms not defined here shall have the meaning given them in 9 VAC 5 Chapter 10 (9 VAC 5-10-10 et seq.), unless otherwise required by context.

C. Terms defined.

"Application area" means the area where the coating is applied by spraying, dipping or flow coating techniques.

"Carbon adsorption system" means a device containing activated carbon as the adsorbent material, an inlet and outlet for exhaust gases, and a system to regenerate the saturated adsorbent. The carbon adsorption system must provide for the proper disposal or reuse of all volatile organic compounds in the adsorbate.

"Coating applicator" means an apparatus used to apply a surface coating.

"Coating application system" means any operation or system wherein a surface coating of one type or function is applied, dried or cured and which is subject to the same emission standard. May include any equipment which applies, conveys, dries or cures a surface coating, including, but not limited to, spray booths, flow coaters, flashoff areas, air dryers, drying areas and ovens. It is not necessary for a coating application system to have an oven, flashoff area or drying area to be included in this definition.

"Fabric coating" means the coating of a textile substrate by knife, roll or rotogravure coating to impart properties that are not initially present, such as strength, stability, water or acid repellency, or appearance.

"Flashoff area" means the space between the application area and the oven.

"Knife coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

"Oven" means a chamber within which heat is used to bake, cure, polymerize or dry a surface coating or any combination of those.

"Paper coating" means the coating of paper and pressure sensitive tapes regardless of substrate by knife, roll or rotogravure coating. Related wet coating process on plastic films and decorative coatings on metal foil are included in this definition.

"Roll coating" means the application of a coating material to a substrate by means of hard rubber or metal rolls.

"Rotogravure coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

9 VAC 5-40-4330. Standard for volatile organic compounds.

A. No owner or other person shall cause or permit the discharge into the atmosphere from a coating application system any volatile organic compound in excess of 2.9 pounds per gallon of coating, excluding water, as delivered by the coating applicator.

B. Achievement of the emission standard in subsection A of this section by use of methods in 9 VAC 5-40-4340 will be acceptable to the board.

C. The provisions of this section shall not be applicable to the production of packaging materials and to printing (graphic arts) operations to the extent provided in subsection D of this section.

D. The production of packaging materials involves two principal operations which emit volatile organic compounds: the coating and laminating of paper, film and foil, and the printing of words, designs and pictures upon webs of paper, film and foil. For the purposes of applicability of the above emission standard, coating is the application of a layer of material across any portion of the web and printing is the formation of words, designs and pictures, usually by a series of application rolls each with only partial coverage. The above emission standard applies to coating and laminating operations in the production of packaging materials, but does not apply to printing operations in the production of packaging materials and to publication rotogravure printing operations (the emission standards in Article 36 (9 VAC 5-40-5060 et seq.) of 9 VAC 5 Chapter 40 apply to such operations). However, all units in a machine which have both coating and printing units will be considered as performing a printing operation. A typical operation is as follows: the first unit applies a uniform background color, subsequent units print additional colors, the final unit applies a varnish overcoat. Such a machine would not be subject to the above emission standard, but would be subject to the emission standards in Article 36 (9 VAC 5-40-5060 et seq.) of 9 VAC 5 Chapter 40.

E. No owner or other person shall use any coating application system or equipment unless reasonable precautions are taken to minimize the discharge or emissions from cleaning or purging operations. Reasonable precautions may include the following:

1. The use of capture or control devices or both;
2. The use of detergents, high pressure water, or other non-volatile cleaning methods;
3. The minimization of the quantity of volatile organic compounds used to clean lines of equipment; and
4. The adjustment of production schedules to minimize coating changes thereby reducing the need for frequent cleaning or purging of a system.

9 VAC 5-40-4340. Control technology guidelines.

The control technology should consist of one of the following:

1. Use of waterborne coatings;
2. Use of high-solids coatings;
3. Use of other low solvent coatings, provided such coatings are approved by the board;
4. Carbon adsorption;
5. Incineration; or
6. Any technology of equal or greater control efficiency when compared to the

use of a coating complying with 9 VAC 5-40-4330 A, provided such technology is approved by the board.

9 VAC 5-40-4350. Standard for visible emissions.

The provisions of Article 1 (9 VAC 5-40-60 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9 VAC 5-40-4360. Standard for fugitive dust/emissions.

The provisions of Article 1 (9 VAC 5-40-60 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9 VAC 5-40-4370. **[Not in SIP]**

9 VAC 5-40-4380. **[Not in SIP]**

9 VAC 5-40-4390. Compliance.

A. The provisions of 9 VAC 5-40-20 (Compliance) apply.

B. The emission standards in 9 VAC 5-40-4330 apply coating by coating or to the volume weighted average of coatings where the coatings are used on a single coating application system and the coatings are the same type or perform the same function. Such averaging shall not exceed 24 hours.

C. Compliance determinations for control technologies not based on compliant coatings (i.e., coating formulation alone) shall be based on the applicable standard in terms of pounds of volatile organic compounds per gallon solids or pounds of volatile organic compounds per gallon solids applied according to the applicable procedure in 9 VAC 5-20-121. Compliance may also be based on transfer efficiency greater than the board accepted baseline transfer efficiency if demonstrated by methods acceptable to the board according to the applicable procedure in 9 VAC 5-20-121.

9 VAC 5-40-4400. Test methods and procedures.

The provisions of 9 VAC 5-40-30 (Emission testing) apply.

9 VAC 5-40-4410. Monitoring.

The provisions of 9 VAC 5-40-40 (Monitoring) apply.

9 VAC 5-40-4420. Notification, records and reporting.

The provisions of 9 VAC 5-40-50 (Notification, Records and Reporting) apply.

9 VAC 5-40-4430. Registration.

The provisions of 9 VAC 5-20-160 (Registration) apply.

9 VAC 5-40-4440. Facility and control equipment maintenance or malfunction.

The provisions of 9 VAC 5-20-180 (Facility and Control Equipment Maintenance or

Malfunction) apply.

9 VAC 5-40-4450. Permits.

A permit may be required prior to beginning any of the activities specified below and the provisions of 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.) and 9 VAC 5 Chapter 80 (9 VAC 5-80-10 et seq.) may apply. Owners contemplating such action should contact the appropriate regional office for guidance.

1. Construction of a facility.
2. Reconstruction (replacement of more than half) of a facility.
3. Modification (any physical change to equipment) of a facility.
4. Relocation of a facility.
5. Reactivation (restart-up) of a facility.