

ANTELOPE VALLEY AIR QUALITY MANAGEMENT DISTRICT

**RULE 1104 -- WOOD FLAT STOCK COATING OPERATIONS**

*(Adopted: 04/07/78; Amended: 12/07/84; Amended: 05/05/89;  
Amended: 03/02/90; Amended: 12/07/90; Amended: 03/01/91;  
Amended: 08/02/91)*

(a) Applicability

This rule applies to all persons applying coatings, inks, and adhesives to wood flat stock for the purpose of manufacturing a finished wood panel intended for attachment to the inside walls of buildings, including, but not limited to, homes and office buildings, mobile homes, trailers, prefabricated buildings and similar structures, boats, and ships; or a finished exterior wood siding intended for use in construction.

(b) Definitions

For the purpose of this rule the following definitions shall apply:

- (1) ADHESIVE is any substance that is capable of bonding surfaces together by attachment.
- (2) CLEAR TOPCOAT means a coating which contains resins and binders but not opaque pigments, and which is specifically formulated to form a transparent or translucent solid protective film.
- (3) COATING is a material which is applied to a surface and which forms a film in order to beautify and/or protect such surface, which includes, but is not limited to, water repellent preservatives, semitransparent stains, opaques stains, filler, and clear top coat.
- (4) DIP COATER is to dip an object into a vat of coating material and drain off any excess coating.
- (5) ELECTROSTATIC APPLICATION is charging of atomized paint droplets for deposition by electrostatic attraction.
- (6) EXEMPT COMPOUNDS are any of the following compounds that have been determined to be non-precursors of ozone:

- (A) Group I (General)
  - chlorodifluoromethane (HCFC-22)
  - dichlorotrifluoroethane (HCFC-123)
  - tetrafluoroethane (HFC-134a)
  - dichlorofluoroethane (HCFC-141b)
  - chlorodifluoroethane (HCFC-142b)
  
- (B) Group II (Under Review)
  - methylene chloride
  - 1,1,1-trichloroethane (methyl chloroform)
  - trifluoromethane (FC-23)
  - trichlorotrifluoroethane (CFC-113)
  - dichlorodifluoromethane (CFC-12)
  - trichlorofluoromethane (CFC-11)
  - dichlorotetrafluoroethane (CFC-114)
  - chloropentafluoroethane (CFC-115)

The Group II compounds may have restrictions on their use because they are toxic or potentially toxic, or upper-atmosphere ozone depleters, or cause other environmental impacts. The District Board has adopted a policy which states that chlorofluorocarbons (CFC) will be phased out at the earliest practicable date on or before 1997.

- (7) EXTERIOR WOOD SIDING is a wood or wood-containing board having a flat surface for use in commercial or residential construction, generally as a covering for an outside wall.
- (8) FILLER is a semisolid viscous material used to fill voids.
- (9) FLOW COATER is to coat an object by flowing a stream of coating over an object and draining off any excess coating.
- (10) GRAMS OF VOC PER LITER OF COATING, ADHESIVES, OR INKS, LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and coating solids, and can be calculated by the following equation:

$$\frac{\text{Grams of VOC per Liter of Coating, Adhesives, or Inks, Less Water and Less Exempt Compounds}}{\text{Less Exempt Compounds}} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

- Where:
- $W_s$  = weight of volatile compounds in grams
  - $W_w$  = weight of water in grams
  - $W_{es}$  = weight of exempt compounds in grams
  - $V_m$  = volume of material in liters
  - $V_w$  = volume of water in liters
  - $V_{es}$  = volume of exempt compounds in liters

- (11) **HAND APPLICATION METHODS** is the application of coatings, sealants, or adhesives by manually held, non-mechanically-operated equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.
- (12) **HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY EQUIPMENT** is used to spray a coating by means of a gun that operates between 0.1 and 10 pounds per square inch gauge (psig) air pressure.
- (13) **INK** is any fluid or viscous composition used in printing, impressing, or transferring an image onto a panel.
- (14) **OPAQUE STAINS** are all stains not classified as semitransparent stains.
- (15) **PANEL** is a flat piece of wood or wood-containing products, usually rectangular, and is attached to the inside walls of homes, office buildings, mobile homes, trailers, prefabricated buildings and similar structures, boats, and ships.
- (16) **PERSON** is any firm, business establishment, association, partnership, corporation, or individual, whether acting as principal, agent, employee, or other capacity, including any governmental entity or charitable organization.
- (17) **ROLL COATER** is a series of mechanical rollers that forms a thin coating film on the surface of roller, which is applied to a substrate by moving the substrate underneath the roller.
- (18) **SEMITRANSSPARENT STAINS** are coatings which are formulated to change the color of a surface but not conceal the surface.
- (19) **SOLVENT CLEANING OPERATION** is the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. Each distinct method of cleaning in a cleaning process which consists of a series of cleaning methods shall constitute a separate solvent cleaning operation.
- (20) **VOLATILE ORGANIC COMPOUND (VOC)** is any volatile chemical compound that contains the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.
- (21) **WATER-REPELLENT PRESERVATIVE** is a penetrating coating designed to protect bare wood from mildew, decay, insect attack, and water staining.
- (22) **WOOD FLAT STOCK** is defined as wood panels and exterior wood siding, which include, by way of illustration and not limitation, redwood, cedar or plywood stocks, plywood panels, particle boards, composition hard boards, and any other panels or siding constructed of solid wood or a wood-containing product.

(c) Requirements

Any person applying a coating, ink, or adhesive to wood flat stock shall comply with all of the following requirements:

(1) Process Requirements

- (A) Use only wood flat stock coatings and adhesives for wood panels which contain no more than 250 grams of volatile organic compounds per liter of coating or adhesive, less water and exempt compounds (2.1 pounds per gallon).
- (B) Use only wood flat stock inks for wood panels which contain no more than 300 grams of volatile organic compounds per liter of ink, less water and exempt compounds (2.5 pounds per gallon).
- (C) Use only wood flat stock coatings for exterior wood siding, which contain no more than 350 grams of volatile organic compounds per liter of coating, less water and exempt compounds (2.9 pounds per gallon).

(2) Application Methods

On or after January 1, 1992, no owner or operator shall apply coatings, adhesives, or inks unless these materials are applied with properly operating equipment, according to operating procedures specified by the equipment manufacturer or the Executive Officer or his designee, and by the use of one of the following methods:

- (A) Flow Coater, Roll Coater, or Dip Coater; or
- (B) Hand Application Methods; or
- (C) High-Volume, Low-Pressure (HVLP) or Electrostatic Application

(3) Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials

On and after July 1, 1992, solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in solvent cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

(4) Control Equipment Requirements

Any person owning or operating a control equipment system, in association with a wood flat stock coating operation, may comply with provisions of subparagraph (c)(1) by using approved control equipment system provided that the VOC emissions from such operations or materials, or both, are reduced in accordance with the following provisions:

- (A) The control device shall reduce emissions from an emission collection system by at least 95 percent, by weight, or the output of the air pollution control device is less than 50 ppm calculated as carbon.
- (B) The emission collection system shall collect at least 90 percent, by weight, of the emissions generated by the sources of emissions.

(d) Recordkeeping Requirements

Notwithstanding provisions of paragraph (g), records shall be maintained pursuant to Rule 109 - Recordkeeping for Volatile Organic Compound Emissions.

(e) Compliance Test Methods

- (1) The VOC content of materials subject to the provisions of this rule shall be determined by EPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A). The exempt compounds' content shall be determined by SCAQMD Laboratory Methods of Analysis for Enforcement Samples - Section III, Method 22.
- (2) The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by EPA Test Methods 25 and 25A, or SCAQMD Method 25.1 (March 1989) (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon).
- (3) The collection efficiency of the fugitive emissions will be determined pursuant to EPA's "Guidelines For Developing Capture Efficiency Protocols."

(f) Alternative Emission Control Plan

Any person may achieve compliance with requirements of paragraph (c) by means of an Alternative Emission Control Plan pursuant to Rule 108 - Alternative Emission Control Plans.

(g) Exemptions

- (1) Laminating of fiberglass, metal, or plastic sheets to wood panels that is subject to the provisions of Rule 1168 - Control of Volatile Organic Compound Emissions from Adhesive Application.
- (2) Coating of wood panels for furniture end use that is subject to the provisions of Rule 1136 - Wood Products Coatings.
- (3) Coating of wood panels for aircraft that is subject to the provisions of Rule 1124 - Aerospace Assembly and Component Manufacturing Operations.

[SIP: Approved 6/23/94, 59 FR 23255, 40 CFR 52.220(c)(186)(i)(C); Approved \_\_\_\_\_, \_\_\_\_\_, 40 CFR 52.220(c)(159)(v)(A); Approved 1/21/81, 46 FR 5965, 40 CFR 52.220(c)(47)(i)(B)]