

**RULE 351. SURFACE COATING OF WOOD PRODUCTS. (Adopted 8/24/1993, Revised 9/21/1995 and 8/20/1998)**

**A. Applicability**

This rule applies to the application of coating to, and surface preparation of, wood products.

**B. Exemptions**

1. This rule shall not apply to residential non-commercial wood products coating operations.
2. The provisions of this rule shall not apply to the application of coatings to stationary structures and their appurtenances subject to the provisions of Rule 323 (Architectural Coatings).
3. The provisions of Sections D. and E. shall not apply to a touch-up or repair coating sold in non-refillable aerosol-spray containers with a capacity of 18 ounces or less.
4. The provisions of Section D shall not apply to any refinishing operation necessary for preservation, to return the wood product to original condition, or to replace missing furniture to produce a matching set.
5. A facility may use up to 20 gallons of coatings per year which do not meet the requirements of Section D.1. Coatings used for operations that are exempt per Sections B.3. and B.4 shall not be included in calculating the volume of coatings used under this exemption. Any person claiming this exemption shall maintain records as required in Section I.4.
6. The Reactive Organic Compound limits of Section D.1 shall not apply to coatings applied to wood products used in the interior of motor vehicles.

**C. Definitions**

**“Binders”** are non-volatile polymeric organic materials (resins) which form the surface film in coating applications.

**“Clear Topcoat”** is a final coating which contains binders, but not opaque pigments, and is specifically formulated to form a transparent or translucent solid protective film.

**“Coating”** is a material which is applied to a surface and forms a film in order to beautify and/or protect such surface.

**“Detailing or Touch-up Guns”** are small air spray equipment, including air brushes, that operate at no greater than 5 CFM air flow and no greater than 50 pounds per square inch gauge (Psig) air pressure as measured at the air inlet and are used to coat small products or portions of products.

**“Dip Coat”** is to submerge an object in a vat of coating material and drain off any excess coating.

**“Electrostatic Application”** is charging of atomized paint droplets for deposition by electrostatic attraction.

**“Exempt Solvents”** means compounds identified as exempt under the definition of "reactive organic compounds," Rule 102.

**“Filler”** is a preparation used to fill in the cracks, grain, etc. of wood before applying a coating.

**“Flow Coat”** is to coat an object by pouring a stream of coating over an object and draining off any excess coating.

**“Grams of Reactive Organic Compound per Liter of Coating (Pounds of Reactive Organic Compound per Gallon of Coating), Less Water and Less Exempt Compounds”** is the weight of Reactive Organic Compound per combined volume of Reactive Organic Compound and coating solids and can be calculated by the following equation:

$$\text{Grams of ROC per liter of Coating, Less Water} = \frac{(W_s - W_w - W_{es})}{V_m - V_w - V_{es}}$$

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

**“Grams of Reactive Organic Compound per Liter of Material (Pounds of Reactive Organic Compound per Gallon of Material)”** is the weight of Reactive Organic Compound per volume of material and can be calculated by the following equation:

$$\text{Grams of ROC per liter of material} = \frac{(W_s - W_w - W_{es})}{V_M}$$

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

**“High-Solids Stains”** are stains containing more than 1 pound of solids per gallon, and can include wiping stains, glazes, and opaque stains.

**“High-Volume Low Pressure (HVLV) Spray”** is to spray a coating by means of a gun that operates between 0.1 and 10.0 pounds per square inch gauge (Psig) air pressure.

**“Ink”** is a fluid that contains dyes and/or colorants and is used to mark, but not to protect surfaces.

**“Low-Solids Stains”** are stains containing 1 pound or less of solids per gallon.

**“Mold-Seal Coating”** is the initial coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

**“Multi-Colored Coating”** is a coating which exhibits more than one color when applied, and which is packaged in a single container and applied in a single coat.

**“Pigmented Coatings”** are opaque coatings which contain binders and colored pigments which are formulated to hide the wood surface, either as an undercoat or topcoat.

**“Repair Coating”** is a coating used to recoat portions of a product which has sustained mechanical damage to the coating following normal painting operations.

**“Roll Coater”** is a series of mechanical rollers that forms a thin coating film on the surface roller, which is applied to a substrate by moving the substrate underneath the roller.

**“Sealer”** is a coating, containing binders, which seals the wood prior to application of the subsequent coatings.

**“Simulated Wood Materials”** are materials, such as plastic, glass, metal, etc., that are made to give a wood-like appearance or are processed like a wood product.

**“Stencil Coating”** is an ink or a pigmented coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers to wood products.

**“Toner”** is a wash coat which contains binders and dyes or pigments to add tint to a coated surface.

**“Touch-up Coating”** is a coating used to cover minor coating imperfections appearing after the main coating operation.

**“Transfer Efficiency”** is the ratio of the weight of coating solids deposited on an object to the total weight of coating solids used in a coating application step, expressed as a percentage.

**“Wash Coat”** is a coating that contains no more than 1.0 pound of solids per gallon, which is used to seal wood surfaces, prevent undesired staining, and control penetration.

**“Wood Products”** are those surface-coated room furnishings which include cabinets (kitchen, bath, and vanity), tables, chairs, beds, sofas, shutters, art objects, and any other coated objects made of solid wood, and/or wood composition, and/or made of simulated wood material used in combination with solid wood or wood composition.

#### **D. Requirement - Reactive Organic Compound Limits**

1. Except as provided in Section D.2, a person shall not apply to a wood product any coating which has a Reactive Organic Compound content, as applied, which exceeds the applicable limit specified in Attachment 1.
2. A person may use coatings with Reactive Organic Compound contents exceeding the levels specified in Attachment 1 provided that they use add-on exhaust control equipment which reduces uncontrolled emissions by at least 85 percent. Such control equipment must be approved in advance by the Control Officer.

#### **E. Requirement - Transfer Efficiency**

A person shall not apply wood products coatings subject to the provisions of this rule unless the coating is applied with properly operating equipment, according to proper operating procedures, and by the use of one of the following methods:

1. electrostatic application; or
2. flow coat; or
3. dip coat; or
4. high-volume, low-pressure (HVLP) spray; or
5. paint brush; or
6. hand roller; or
7. roll coater; or
8. detailing or touch-up guns; or
9. such other coating application methods as are demonstrated to the Control Officer to be capable of achieving at least 65 percent transfer efficiency, and for which written approval of the Control Officer has been obtained.

#### **F. Requirement - Prohibition of Specification**

No person shall solicit, require for use, or specify the application of a coating on a wood product if such use or application results in a violation of the provisions of this Rule. The prohibition of this Section shall apply to all written or oral contracts under the terms of which any coating which is subject to the provisions of this Rule is to be applied to any wood product at any physical location within the District.

#### **G. Closed Containers**

All reactive organic compounds-containing materials, used or unused, including but not limited to surface coatings, thinners, cleanup solvents, or surface preparation materials shall be stored in closed containers and opened only during extraction or introduction of material for mixing, use or storage.

## **H. Test Methods**

1. Reactive Organic Compound content and solids content of coating shall be determined using Environmental Protection Agency Reference Method 24 or an equivalent as determined by the Control Officer, Air Resources Board, and Environmental Protection Agency.
2. Compliance with Section E.9 shall be determined using a method which shall:
  - a. be approved by the Environmental Protection Agency (e.g., South Coast Air Quality Management District Procedure for Testing Spray Equipment Transfer Efficiency); and
  - b. simulate the transfer efficiency achieved during the actual operations; and
  - c. have received written approval by the Control Officer, Air Resources Board and Environmental Protection Agency.
3. Destruction/treatment efficiency as required to determine compliance with Section D.2 shall be determined by using Environmental Protection Agency Method 25, Environmental Protection Agency Method 25a or a method determined to be equivalent and approved by the Control Officer, Air Resources Board and Environmental Protection Agency.
4. Capture efficiency as required to determine compliance with Section D.2 shall be determined according to the most recently adopted version of Environmental Protection Agency's technical document "Guidelines for Determining Capture Efficiency". The most recently adopted version as of this adoption is January 9, 1995
5. Emissions or Reactive Organic Compound contents determined to exceed any of the limits of this rule through the use of any of the above-referenced or equivalent test methods shall constitute a violation of this rule.

## **I. Recordkeeping**

1. Operators of facilities subject to this Rule shall maintain a current listing of all materials in use at their facility. This listing shall include:
  - a. material and manufacturer identification;
  - b. coating type (i.e. clear topcoat, filler, high solid stains, etc.)
  - c. specific mixing ratio used to arrive at maximum Reactive Organic Compound content,
  - d. maximum Reactive Organic Compound content of coatings less water and exempt solvents as applied (including thinning solvents) or Reactive Organic Compound content of materials as applied which ever is applicable;
2. Operators of facilities that require a permit to operate pursuant to Rule 201 shall maintain on a monthly basis a record of the volume, reactive organic compounds content and resulting reactive organic compounds emissions of each reactive organic compounds-containing material used. Operators of facilities exempt from a permit to operate pursuant to Rule 202 shall maintain the records necessary to substantiate their exempt status.
3. Operators of facilities that use noncompliant coating materials with compliance achieved through the operation of emission control equipment shall maintain a current listing of all Reactive Organic Compound containing materials used at the facility as required in Section I.1. In addition these facilities shall maintain, on a daily basis, consumption data and the key operating parameters for emission control equipment.

4. A person using up to 20 gallons per calendar year of otherwise non-compliant coatings in accordance with the exemption in Section B.5 shall maintain purchase records of the total volume of coatings used under the exemption.
5. All records shall be retained and available for inspection by the Control Officer for 36 months.

## Attachment 1

	ROC LIMITS (less water and exempt compounds)			
	On and After 7/1/97		On and After* 7/1/2005	
	(g/L)	(lb/gal)	(g/L)	(lb/gal)
Clear topcoats	550	4.6	275	2.3
Filler	500	4.2	275	2.3
High-Solid Stains				
Non-glaze	700	5.8	240	2.0
Glaze	700	5.8	240	2.0
Inks	500	4.2	500	4.2
Mold-Seal Coatings	750	6.3	750	6.3
Multi-Colored Coating	350	2.9	275	2.3
Pigmented Coating	350	2.9	275	2.3
Sealer	550	4.6	275	2.3
	ROC LIMITS			
Low-Solids Stain, Toner, or Washcoat	480	4.0	120	1.0

---

\* These limits will be withheld from the State Implementation Plan until their actual implementation.