## RULE 433. ARCHITECTURAL COATINGS

*(Adopted 3/26/02)*

### A. APPLICABILITY

1. Except as provided in Subsection A.2, this Rule is applicable to any person who supplies, sells, offers for sale, or manufactures any architectural coating for use within the San Luis Obispo County Air Pollution Control District (District), as well as any person who applies or solicits the application of any architectural coating within the District.

2. This Rule does not apply to:

   a. Any architectural coating that is sold or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.

   b. Any aerosol coating product.

   c. Any architectural coating that is sold in a container with a volume of one liter (1.057 quart) or less.

### B. DEFINITIONS

1. "Adhesive": Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

2. "Aerosol Coating Product": A pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marking applications.

3. "Antenna Coating": A coating labeled and formulated exclusively for application to equipment and associated structural appurtenances that are used to receive or transmit electromagnetic signals.

4. "Antifouling Coating": A coating labeled and formulated for application to submerged stationary structures and their appurtenances to prevent or reduce the attachment of marine or freshwater biological organisms. To qualify as an antifouling coating, the coating must be registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Section 136, *et seq.*) and with the California Department of Pesticide Regulation.

5. "Appurtenance": Any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed

mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.

6. "Architectural Coating": A coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and adhesives are not considered architectural coatings for the purposes of this Rule.

7. "Bitumens": Black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.

8. "Bituminous Roof Coating": A coating which incorporates bitumens that is labeled and formulated exclusively for roofing.

9. "Bituminous Roof Primer": A primer which incorporates bitumens that is labeled and formulated exclusively for roofing.

10. "Bond Breaker": A coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.

11. "Clear Brushing Lacquers": Clear wood finishes, excluding clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by solvent evaporation without chemical reaction and to provide a solid, protective film, which are intended exclusively for application by brush, and which are labeled as specified in Subsection D.5.

12. "Clear Wood Coatings": Clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates to provide a transparent or translucent solid film.

13. "Coating": A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, and stains.

14. "Colorant": A concentrated pigment dispersion in water, solvent, and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.

15. "Concrete Curing Compound": A coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water.

16. "Dry Fog Coating": A coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.

17. "Exempt Compound": A compound identified as exempt under the definition of Volatile Organic Compound (VOC) in the current version of District Rule 105, Definitions. Exempt compounds content of a coating shall be determined by U.S. EPA Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-91 (Revised August 1996), incorporated by reference in Subsection F.5.j.

18. "Faux Finishing Coating": A coating labeled and formulated as a stain or glaze to create artistic effects including, but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain.

19. "Fire-Resistive Coating": An opaque coating labeled and formulated to protect the structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing assemblies of structural materials into compliance with federal, state, and local building code requirements. The fire-resistive coating and the testing agency must be approved by building code officials. The fire-resistive coating shall be tested in accordance with ASTM Designation E 119-98, incorporated by reference in Subsection F.5.b.

20. "Fire-Retardant Coating": A coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The fire-retardant coating and the testing agency must be approved by building code officials. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-99, incorporated by reference in Subsection F.5.a.

21. "Flat Coating": A coating that is not defined under any other definition in this Rule and that registers gloss less than 15 on an 85-degree meter or less than 5 on a 60-degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection F.5.c.

22. "Floor Coating": An opaque coating that is labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, and other horizontal surfaces which may be subject to foot traffic.

23. "Flow Coating": A coating labeled and formulated exclusively for use by electric power companies or their subcontractors to maintain the protective coating systems present on utility transformer units.

24. "Form-Release Compound": A coating labeled and formulated for application to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.

25. "Graphic Arts Coating or Sign Paint": A coating labeled and formulated for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers, and bulletin enamels.

26. "High-Temperature Coating": A high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

27. "Industrial Maintenance Coating": A high performance architectural coating, including primers, sealers, undercoaters, intermediate coats, and topcoats, formulated for application to substrates exposed to one or more of the following extreme environmental conditions listed in Subsections B.27.a through e, and labeled as specified in Subsection D.4:

    a. Immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;

    b. Acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;

    c. Repeated exposure to temperatures above 121°C (250°F);

    d. Repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleansers, or scouring agents; or

    e. Exterior exposure of metal structures and structural components.

28. "Lacquer": A clear or opaque wood coating, including clear lacquer sanding sealers, formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and to provide a solid, protective film.

29. "Low Solids Coating": A coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material.

30. "Magnesite Cement Coating": A coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

31. "Mastic Texture Coating": A coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and is applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.

32. "Metallic Pigmented Coating": A coating containing at least 48 grams of elemental metallic pigment per liter of coating as applied (0.4 pounds per gallon),

when tested in accordance with SCAQMD Method 318-95, incorporated by reference in Subsection F.5.d .

33. "Multi-Color Coating": A coating that is packaged in a single container and that exhibits more than one color when applied in a single coat.

34. "Nonflat Coating": A coating that is not defined under any other definition in this Rule and that registers a gloss of 15 or greater on an 85-degree meter and 5 or greater on a 60-degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection F.5.c.

35. "Nonflat - High Gloss Coating": A nonflat coating that registers a gloss of 70 or above on a 60-degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection F.5.c.

36. "Nonindustrial Use": Nonindustrial use means any use of architectural coatings except in the construction or maintenance of any of the following: facilities used in the manufacturing of goods and commodities; transportation infrastructure, including highways, bridges, airports and railroads; facilities used in mining activities, including petroleum extraction; and utilities infrastructure, including power generation and distribution, and water treatment and distribution systems.

37. "Post-Consumer Coating": A finished coating that would have been disposed of in a landfill, having completed its usefulness to a consumer, and does not include manufacturing wastes.

38. "Pre-Treatment Wash Primer": A primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM Designation D 1613-96, incorporated by reference in Subsection F.5.e, that is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.

39. "Primer": A coating labeled and formulated for application to a substrate to provide a firm bond between the substrate and subsequent coats.

40. "Quick-Dry Enamel": A nonflat coating that is labeled as specified in Subsection D.8 and that is formulated to have the following characteristics:

    a. Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16 and 27°C (60 and 80°F);

    b. When tested in accordance with ASTM Designation D 1640-95, incorporated by reference in Subsection F.5.f , sets to touch in 2 hours or less, is tack free in 4 hours or less, and dries hard in 8 hours or less by the mechanical test method; and

    c. Has a dried film gloss of 70 or above on a 60 degree meter.

41. "Quick-Dry Primer, Sealer, and Undercoater": A primer, sealer, or undercoater that is dry to the touch in 30 minutes and can be recoated in 2 hours when tested in accordance with ASTM Designation D 1640- 95, incorporated by reference in Subsection F.5.f.

42. "Recycled Coating": An architectural coating formulated such that not less than 50 percent of the total weight consists of secondary and post-consumer coating, with not less than 10 percent of the total weight consisting of post-consumer coating.

43. "Residence": Areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.

44. "Roof Coating": A non-bituminous coating labeled and formulated exclusively for application to roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and ultraviolet radiation. Metallic pigmented roof coatings which qualify as metallic pigmented coatings shall not be considered to be in this category, but shall be considered to be in the metallic pigmented coatings category.

45. "Rust Preventative Coating": A coating formulated for nonindustrial use to prevent the corrosion of metal surfaces and labeled as specified in Subsection D.6.

46. "Sanding Sealer": A clear or semi-transparent wood coating labeled and formulated for application to bare wood to seal the wood and to provide a coat that can be abraded to create a smooth surface for subsequent applications of coatings. A sanding sealer that also meets the definition of a lacquer is not included in this category, but is included in the lacquer category.

47. "Sealer": A coating labeled and formulated for application to a substrate for one or more of the following purposes: to prevent subsequent coatings from being absorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

48. "Secondary Coating (Rework)": A fragment of a finished coating or a finished coating from a manufacturing process that has converted resources into a commodity of real economic value, but does not include excess virgin resources of the manufacturing process.

49. "Shellac": A clear or opaque coating formulated solely with the resinous secretions of the lac beetle (*Laciffer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

50. "Shop Application": Application of a coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production, or repairing process (e.g., original equipment manufacturing coatings).

51. "Solicit": To require for use or to specify, by written or oral contract.

52. "Specialty Primer, Sealer, and Undercoater": A coating labeled as specified in Subsection D.7 and that is formulated for application to a substrate to seal fire, smoke or water damage; to condition excessively chalky surfaces, or to block stains. An excessively chalky surface is one that is defined as having a chalk rating of four or less as determined by ASTM Designation D 4214-98, incorporated by reference in Subsection F.5.g.

53. "Stain": A clear, semitransparent, or opaque coating labeled and formulated to change the color of a surface but not conceal the grain pattern or texture.

54. "Swimming Pool Coating": A coating labeled and formulated to coat the interior of swimming pools and to resist swimming pool chemicals.

55. "Swimming Pool Repair and Maintenance Coating": A rubber based coating labeled and formulated to be used over existing rubber based coatings for the repair and maintenance of swimming pools.

56. "Temperature-Indicator Safety Coating": A coating labeled and formulated as a color-changing indicator coating for the purpose of monitoring the temperature and safety of the substrate, underlying piping, or underlying equipment, and for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

57. "Tint Base": An architectural coating to which colorant is added after packaging in sale units to produce a desired color.

58. "Traffic Marking Coating": A coating labeled and formulated for marking and striping streets, highways, or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks, and airport runways.

59. "Undercoater": A coating labeled and formulated to provide a smooth surface for subsequent coatings.

60. "Varnish": A clear or semi-transparent wood coating, excluding lacquers and shellacs, formulated to dry by chemical reaction on exposure to air. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.

61. "Volatile Organic Compound (VOC)": As defined in the current version of District Rule 105, Definitions.

62. "VOC Content": The weight of VOC per volume of coating, calculated according to the procedures specified in Subsection F.1.

63. "Waterproofing Sealer": A coating labeled and formulated for application to a porous substrate for the primary purpose of preventing the penetration of water.

64. "Waterproofing Concrete/Masonry Sealer": A clear or pigmented film-forming coating that is labeled and formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and staining.

65. "Wood Preservative": A coating labeled and formulated to protect exposed wood from decay or insect attack, that is registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code (U.S.C.) Section 136, *et seq.*) and with the California Department of Pesticide Regulation.

C. STANDARDS

1. VOC Content Limits: Except as provided in Subsections C.2, C.3, C.8, and C.9, no person shall:

   a. Manufacture, blend, or repackage for sale within the district;

   b. Supply, sell, or offer for sale within the district; or

   c. Solicit for application or apply within the district, any architectural coating with a VOC content in excess of the corresponding limit specified in Table 433-1, after the specified effective date in Table 433-1.

2. Most Restrictive VOC Limit: If anywhere on the container of any architectural coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf, any representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in Table 433-1, then the most restrictive VOC content limit shall apply. This provision does not apply to the coating categories specified in Subsections C.2.a through C.2.o.

   a. Antenna Coatings.
   b. Antifouling Coatings.
   c. Bituminous Roof Primers.
   d. Fire-Retardant Coatings.
   e. Flow Coatings.
   f. High Temperature Coatings.
   g. Industrial Maintenance Coatings.
   h. Lacquer Coatings (including Lacquer Sanding Sealers).
   i. Low-Solids Coatings.
   j. Metallic Pigmented Coatings.
   k. Pretreatment Wash Primers.
   l. Shellacs.
   m. Specialty Primers, Sealers, and Undercoaters.
   n. Temperature-Indicator Safety Coatings.
   o. Wood Preservatives.

3. Sell-Through of Coatings:

a. A coating manufactured prior to the January 1, 2003 or January 1, 2004 effective date specified for that coating in Table 433-1 may be sold, supplied, or offered for sale for up to three years after the specified effective date. In addition, a coating manufactured before the effective date specified for that coating in Table 433-1 may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured. This Subsection does not apply to any coating that complies with the future effective January 1, 2003 or January 1, 2004 limits or that does not display the date or date-code required by Subsection D.1.

b. A coating included in an approved Averaging Program that does not comply with the specified limit in the Table 433-1 may be sold, supplied, or offered for sale for up to three years after the end of the compliance period specified in the approved Averaging Program. In addition, such a coating may be applied at any time, both during and after the compliance period. This Subsection does not apply to any coating that does not display on the container either the statement: "This product is subject to architectural coatings averaging provisions in California" or a substitute symbol specified by the Executive Officer of the California Air Resources Board. This Subsection shall remain in effect until January 1, 2008.

4. Painting Practices: All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.

5. Thinning: No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in Table 433-1.

6. Rust Preventative Coatings: After January 1, 2004, a person shall only apply or solicit the application of a rust preventative coating for non-industrial uses, unless the rust preventative coating complies with the industrial maintenance coating VOC limit specified in Table 433-1.

7. Coatings Not Listed in Table 433-1: For any coating that does not meet any of the definitions for the specialty coatings categories listed in Table 433-1, the VOC content limit shall be determined by classifying the coating as a flat coating or a nonflat coating, based on its gloss, as defined in Subsections B.21, B.34, and B.35 and the corresponding flat or nonflat VOC limit shall apply.

8. Lacquers: Notwithstanding the provisions of Section C, a person or facility may add up to 10 percent by volume of VOC to a lacquer to avoid blushing of the finish during days with relative humidity greater than 70 percent and temperature below 65°F, at the time of application, provided that the coating contains acetone and no more than 550 grams of VOC per liter of coating, less water and exempt compounds, prior to the addition of VOC.

9. Averaging Compliance Option: On or after January 1, 2003, in lieu of compliance with the specified limits in Table 433-1 for floor coatings; industrial maintenance coatings; primers, sealers, and undercoaters; quick-dry primers, sealers, and undercoaters; quick-dry enamels; roof coatings; bituminous roof coatings; rust preventative coatings; stains; waterproofing sealers, as well as flats and non-flats (excluding recycled coatings), manufacturers may average designated coatings such that their actual cumulative emissions from the averaged coatings are less than or equal to the cumulative emissions that would have been allowed under those limits over a compliance period not to exceed one year. Such manufacturers must also comply with the averaging provisions contained in Attachment 433-A, as well as maintain and make available for inspection records for at least three years after the end of the compliance period. This Subsection and Attachment 433-A shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed.

D. CONTAINER LABELING REQUIREMENTS. Each manufacturer of any architectural coating subject to this Rule shall display the information listed in Subsections D.1 through D.8 on the coating container (or label) in which the coating is sold or distributed.

1. Date Code: The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the ARB.

2. Thinning Recommendations: A statement of the manufacturer□s recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.

3. VOC Content: Each container of any coating subject to this Rule shall display either the maximum or the actual VOC content of the coating, as supplied, including the maximum thinning as recommended by the manufacturer. VOC content shall be displayed in grams of VOC per liter of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using the test methods in Subsection F.2. The equations in Subsection F.1 shall be used to calculate VOC content.

4. Industrial Maintenance Coatings: In addition to the information specified in Subsection D.1, D.2, and D.3, each manufacturer of any industrial maintenance coating subject to this Rule shall display on the label or lid of the container in

which the coating is sold or distributed one or more of the descriptions listed in Subsections D.4.a through D.4.c.

a. "For industrial use only."
b. "For professional use only."
c. "Not for residential use" or "Not intended for residential use."

5. Clear Brushing Lacquers: Effective January 1, 2003, the labels of all clear brushing lacquers shall prominently display the statements "For brush application only," and "This product must not be thinned or sprayed."

6. Rust Preventative Coatings: Effective January 1, 2003, the labels of all rust preventative coatings shall prominently display the statement "For Metal Substrates Only."

7. Specialty Primers, Sealers, and Undercoaters: Effective January 1, 2003, the labels of all specialty primers, sealers, and undercoaters shall prominently display one or more of the descriptions listed in Subsection D.7.a through D.7.e.

a. For blocking stains.
b. For fire-damaged substrates.
c. For smoke-damaged substrates.
d. For water-damaged substrates.
e. For excessively chalky substrates.

8. Quick Dry Enamels: Effective January 1, 2003, the labels of all quick dry enamels shall prominently display the words "Quick Dry" and the dry hard time.

9. Nonflat - High Gloss Coatings: Effective January 1, 2003, the labels of all nonflat high gloss coatings shall prominently display the words "High Gloss."

## E. REPORTING REQUIREMENTS

1. Clear Brushing Lacquers: Each manufacturer of clear brushing lacquers shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of clear brushing lacquers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

2. Rust Preventative Coatings: Each manufacturer of rust preventative coatings shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of rust preventative coatings sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

3. Specialty Primers, Sealers, and Undercoaters: Each manufacturer of specialty primers, sealers, and undercoaters shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of specialty primers, sealers, and undercoaters sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

4. Toxic Exempt Compounds: For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, report to the Executive Officer of the ARB the following information for products sold in the State during the preceding year:

   a. The product brand name and a copy of the product label with legible usage instructions;

   b. The product category listed in Table 433-1 to which the coating belongs;

   c. The total sales in California during the calendar year to the nearest gallon;

   d. The volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.

5. Recycled Coatings: Manufacturers of recycled coatings must submit a letter to the Executive Officer of the ARB certifying their status as a Recycled Paint Manufacturer. The manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall include, for all recycled coatings, the total number of gallons distributed in the State during the preceding year, and shall describe the method used by the manufacturer to calculate State distribution.

6. Bituminous Coatings: Each manufacturer of bituminous roof coatings or bituminous roof primers shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of ARB. The report shall specify the number of gallons of bituminous roof coatings or bituminous roof primers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

## F. COMPLIANCE PROVISIONS AND TEST METHODS

1. Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in Table 433-1, the VOC content of a coating shall be determined by using the procedures described in Subsection F.1.a or F.1.b, as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.

a. With the exception of low solids coatings, determine the VOC content in grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water and exempt compounds. Determine the VOC content using equation (1) as follows:

$$\text{VOC Content} = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})} \qquad (1)$$

Where:

| | | |
|---|---|---|
| VOC Content | = | grams of VOC per liter of coating |
| $W_s$ | = | weight of volatiles, in grams |
| $W_w$ | = | weight of water, in grams |
| $W_{ec}$ | = | weight of exempt compounds, in grams |
| $V_m$ | = | volume of coating, in liters |
| $V_w$ | = | volume of water, in liters |
| $V_{ec}$ | = | volume of exempt compounds, in liters |

b. For low solids coatings, determine the VOC content in units of grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, including the volume of any water and exempt compounds. Determine the VOC content using equation (2) as follows:

Where:

$\text{VOC Content}_{ls}$ = the VOC content of a low solids coating in grams of VOC per liter of coating

$$\text{VOC Content}_{ls} = \frac{(W_s - W_w - W_{ec})}{(V_m)} \qquad (2)$$

| | | |
|---|---|---|
| $W_s$ | = | weight of volatiles, in grams |
| $W_w$ | = | weight of water, in grams |
| $W_{ec}$ | = | weight of exempt compounds, in grams |
| $V_m$ | = | volume of coating, in liters |

2. <u>VOC Content of Coatings</u>: To determine the physical properties of a coating in order to perform the calculations in Subsection F.1; the reference method for VOC content is U.S. EPA Method 24, incorporated by reference in Subsection F.5.k, except as provided in Subsections F.3 and F.4. An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996), incorporated by reference in Subsection F.5.l. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised August 1996), incorporated by reference in Subsection F.5.j. To determine the VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in Subsection F.3, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended

(e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of a Method 24 test and any other means for determining VOC content, the Method 24 test results will govern, except when an alternative method is approved as specified in Subsection F.3. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct a Method 24 analysis.

3. Alternative Test Methods: Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with Subsection F.2, after review and approved in writing by the staffs of the District, the ARB, and the U.S. EPA, may also be used.

4. Methacrylate Traffic Marking Coatings: Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of U.S. EPA Method 24 (40 CFR 59, subpart D, Attachment 433-A), incorporated by reference in Subsection F.5.m. This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.

5. Test Methods: The following test methods are incorporated by reference herein, and shall be used to test coatings subject to the provisions of this Rule:

   a. Flame Spread Index: The flame spread index of a fire-retardant coating shall be determined by ASTM Designation E 84-99, "Standard Test Method for Surface Burning Characteristics of Building Materials" (see Section B, Fire-Retardant Coating).

   b. Fire Resistance Rating: The fire resistance rating of a fire-resistive coating shall be determined by ASTM Designation E 119-98, "Standard Test Methods for Fire Tests of Building Construction Materials" (see Section B, Fire-Resistive Coating).

   c. Gloss Determination: The gloss of a coating shall be determined by ASTM Designation D 523-89 (1999), "Standard Test Method for Specular Gloss" (see Section B, Flat Coating, Nonflat Coating, Nonflat - High Gloss Coating, and Quick-Dry Enamel).

   d. Metal Content of Coatings: The metallic content of a coating shall be determined by SCAQMD Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," *SCAQMD Laboratory Methods of Analysis for Enforcement Samples* (see Section B, Metallic Pigmented Coating).

   e. Acid Content of Coatings: The acid content of a coating shall be determined by ASTM Designation D 1613-96, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products" (see Section B, Pre-Treatment Wash Primer).

f. Drying Times: The set-to-touch, dry-hard, dry-to-touch, and dry-to-recoat times of a coating shall be determined by ASTM Designation D 1640-95, "Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature" (see Section B, Quick-Dry Enamel and Quick-Dry Primer, Sealer, and Undercoater). The tack-free time of a quick-dry enamel coating shall be determined by the Mechanical Test Method of ASTM Designation D 1640-95.

g. Surface Chalkiness: The chalkiness of a surface shall be determined using ASTM Designation D 4214-98, "Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films" (see Section B, Specialty Primer, Sealer, and Undercoater).

h. Exempt Compounds - Siloxanes: Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section F by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," *BAAQMD Manual of Procedures*, Volume III, adopted 11/6/96 (see Section B, Volatile Organic Compound, and Subsection F.2).

i. Exempt Compounds--Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with Section 6 by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," *BAAQMD Manual of Procedures*, Volume III, adopted 12/20/95 (see Section B, Volatile Organic Compound, and Subsection F.2).

j. Exempt Compounds: The content of compounds exempt under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1996), "Determination of Exempt Compounds," *SCAQMD Laboratory Methods of Analysis for Enforcement Samples* (see Section B, Volatile Organic Compound, and Subsection F.2).

k. VOC Content of Coatings: The VOC content of a coating shall be determined by U.S. EPA Method 24 as it exists in appendix A of 40 *Code of Federal Regulations* (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings" (see Subsection F.2).

l. Alternative VOC Content of Coatings: The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," *SCAQMD Laboratory Methods of Analysis for Enforcement Samples* (see Subsection F.2).

m. Methacrylate Traffic Marking Coatings: The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998) (see Subsection F.4).

## Table 433-1
## VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Limits are expressed in grams of VOC per liter[a] of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, exempt compounds, or colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.

| Coating Category | Effective 1/1/2003 | Effective 1/1/2004 |
|---|---|---|
| **Flat Coatings** | 100 | |
| **Nonflat Coatings** | 150 | |
| **Nonflat - High Gloss Coatings** | 250 | |
| **Specialty Coatings** | | |
| Antenna Coatings | 530 | |
| Antifouling Coatings | 400 | |
| Bituminous Roof Coatings | 300 | |
| Bituminous Roof Primers | 350 | |
| Bond Breakers | 350 | |
| Clear Wood Coatings<br>X Clear Brushing Lacquers<br>X Lacquers (including lacquer sanding sealers)<br>X Sanding Sealers (other than lacquer sanding sealers)<br>X Varnishes | <br>680<br>550<br>350<br>350 | |
| Concrete Curing Compounds | 350 | |
| Dry Fog Coatings | 400 | |
| Faux Finishing Coatings | 350 | |
| Fire Resistive Coatings | 350 | |
| Fire-Retardant Coatings:<br>X Clear<br>X Opaque | <br>650<br>350 | |
| Floor Coatings | 250 | |
| Flow Coatings | 420 | |
| Form-Release Compounds | 250 | |
| Graphic Arts Coatings (Sign Paints) | 500 | |

## Table 433-1 (continued)

| Coating Category | Effective 1/1/2003 | Effective 1/1/2004 |
|---|---|---|
| High Temperature Coatings | 420 | |
| Industrial Maintenance Coatings | 450 | 250 |
| Low Solids Coatings[b] | 120 | |
| Magnesite Cement Coatings | 450 | |
| Mastic Texture Coatings | 300 | |
| Metallic Pigmented Coatings | 500 | |
| Multi-Color Coatings | 250 | |
| Pre-Treatment Wash Primers | 420 | |
| Primers, Sealers, and Undercoaters | 200 | |
| Quick-Dry Enamels | 250 | |
| Quick-Dry Primers, Sealers, and Undercoaters | 200 | |
| Recycled Coatings | 250 | |
| Roof Coatings | 250 | |
| Rust Preventative Coatings | 400 | |
| Shellacs:<br>X Clear<br>X Opaque | <br>730<br>550 | |
| Specialty Primers, Sealers, and Undercoaters | 350 | |
| Stains | 250 | |
| Swimming Pool Coatings | 340 | |
| Swimming Pool Repair and Maintenance Coatings | 340 | |
| Temperature-Indicator Safety Coatings | 550 | |
| Traffic Marking Coatings | 150 | |
| Waterproofing Sealers | 250 | |
| Waterproofing Concrete/Masonry Sealers | 400 | |
| Wood Preservatives | 350 | |

a Conversion factor: one pound VOC per gallon (U.S.) = 119.95 grams VOC per liter.
b Units are grams of VOC per liter (pounds of VOC per gallon) of coating, including water and exempt compounds.

# ATTACHMENT 433-A:
# AVERAGING PROVISION

## A. AVERAGING PROVISION

A.1 The manufacturer shall demonstrate that actual emissions from the coatings being averaged are less than or equal to the allowable emissions, for the specified compliance period using the following equation:

$$\sum_{i=1}^{n} GiMi \leq \sum_{i=1}^{n} GiViLi$$

Where:

$\sum_{i=1}^{n} GiMi$ = Actual Emissions

$\sum_{i=1}^{n} GiViLi$ = Allowable Emissions

Gi = Total Gallons of Product (i) subject to Averaging;

Mi = Material VOC Content of Product (i), in pounds per gallon;

$$Mi = \frac{Ws - Ww - Wec}{Vm}$$

Vi = Percent by Volume Solids and VOC in Product (i);

$$Vi = \frac{Vm - Vw - Vec}{Vm}$$

Where: Ws, Ww, Wec, Vm, Vw, and Vec are defined in subsection 6.1, except that in this Appendix weights are in pounds and volumes are in gallons.

For Non - Zero VOC Coatings :

$$Vi = \frac{\text{Material VOC (also known as VOC Actual)}}{\text{Coating VOC (also known as VOC Regulatory)}}$$

Where: Coating VOC $= \frac{Ws - Ww - Wec}{Vm - Vw - Vec}$

For Zero VOC Coatings :

Vi = Percent Solids by Volume

Li = Regulatory VOC Content Limit for Product (i), in pounds per gallon (as listed in Table 1)

The averaging is limited to coatings that are designated by the manufacturer. Any coating not designated in the averaging Program shall comply with the VOC limit in Table 433-1. The manufacturer shall not include any quantity of coatings that it knows or should have known will not be used in the State, if statewide coatings data are used. If district-specific coatings data are used, the manufacturer shall not include any quantity of coatings that it knows or should have known will not be used in the District.

A.1.1 In addition to the requirements specified in Section A.1, manufacturers shall not include in an Averaging Program any coating with a VOC content in excess of the following maximum VOC content, for the applicable categories.

| Averaging Categories and VOC Ceiling (Maximum VOC Allowed) | | |
|---|---|---|
| Category | Rule VOC Limit (In effect or effective 1/1/2003 or 1/1/2004) | Averaging VOC Ceiling (Maximum) |
| Flat Coating | 100 | 250 |
| Nonflat Coating | 150 | 250 |
| Floor Coatings | 250 | 400 |
| Industrial Maintenance Coatings | 250 | 420 |
| Primers, Sealers, and Undercoaters | 200 | 350 |
| Quick-Dry Primers, Sealers, and Undercoaters | 200 | 450 |
| Quick-Dry Enamels | 250 | 400 |
| Roof Coatings | 250 | 250 |
| Bituminous Roof Coatings | 300 | 300 |
| Rust Preventative Coatings | 400 | 400 |
| Stains | 250 | 350 |
| Waterproofing Sealers | 250 | 400 |

## A.2 AVERAGING PROGRAM (PROGRAM)

At least six months prior to the start of the compliance period, manufacturers shall submit an Averaging Program to the Executive Officer of the Air Resources Board. As used in this Attachment 433-A, "Executive Officer" means the Executive Officer of the Air Resources Board. Averaging may not be implemented until the Program is approved in writing by the Executive Officer.

Within 45 days of submittal of a complete Program, the Executive Officer shall either approve or disapprove the Program. The Program applicant and the Executive Officer may agree to an extension of time for the Executive Officer to take action on the Program.

## A.3 GENERAL REQUIREMENTS

The Program shall include all necessary information for the Executive Officer to make a determination as to whether the manufacturer may comply with the averaging requirements over the specified compliance period in an enforceable manner. Such information shall include, but is not limited to, the following:

A.3.1 An identification of the contact persons, telephone numbers, and name of the manufacturer who is submitting the Program.

A.3.2 An identification of each coating that has been selected by the manufacturer for inclusion in this program that exceeds the applicable VOC limit in Table 433-1, its VOC content specified in units of both VOC actual and VOC regulatory, and the designation of the coating category.

A.3.3 A detailed demonstration showing that the projected actual emissions will not exceed the allowable emissions for a single compliance period that the Program will be in effect. In addition, the demonstration shall include VOC content information for each coating that is below the compliance limit in Table 433-1. The demonstration shall use the equation specified in Subsection A.1 of this Attachment for projecting the actual emissions and allowable emissions during each compliance period. The demonstration shall also include all VOC content levels and projected volume sold within the State for each coating listed in the Program during each compliance period. The requested data can be summarized in a matrix form.

A.3.4 A specification of the compliance period(s) and applicable reporting dates. The length of the compliance period shall not be more than one year or less than six months.

A.3.5 An identification and description of all records to be made vailable to the Executive Officer upon request, if different than those identified under Subsection A.3.6.

A.3.6 An identification and description of specific records to be used in calculating emissions for the Program and subsequent reporting, and a detailed explanation as to how those records will be used by the manufacturer to verify compliance with the averaging requirements.

A.3.7 A statement, signed by a responsible party for the manufacturer, that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request.

## A.4 REPORTING REQUIREMENTS

A.4.1 For every single compliance period, the manufacturer shall submit a mid-term report listing all coatings subject to averaging during the first half of the compliance period, detailed analysis of the actual and allowable emissions at the end of the mid-term, and an explanation as to how the manufacturer intends to achieve compliance by the end of the compliance period. The report shall be signed by the responsible party for the manufacturer, attesting that all information submitted is true and correct. The mid-term report shall be submitted within 45 days after the midway date of the compliance period. A manufacturer may request, in writing, an extension of up to 15 days for submittal of the mid-term report.

A.4.2 Within 60 days after the end of the compliance period or upon termination of the Program, whichever is sooner, the manufacturer shall submit to the Executive Officer a report listing all coatings subject to averaging during the compliance period, providing a detailed demonstration of the balance between the actual and allowable emissions for the compliance period, any identification and description of specific records used by the manufacturer to verify compliance with the averaging requirement, and any other information requested by the Executive Officer to determine whether the manufacturer complied with the averaging requirements over the specified compliance period. The report shall be signed by the responsible party for the manufacturer, attesting that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request. A manufacturer may request, in writing, an extension of up to 30 days for submittal of the final report.

## A.5 RENEWAL OF A PROGRAM

A Program automatically expires at the end of the compliance period. The manufacturer may request a renewal of the Program by submitting a renewal request that shall include an updated Program, meeting all applicable Program requirements. The renewal request will be considered conditionally approved until the Executive Officer makes a final decision to deny or approve the renewal request based on a determination of whether the manufacturer is likely to comply with the averaging requirements. The Executive Officer shall base such determination on all available information, including but not limited to, the mid-term and the final reports of the preceding compliance period. The Executive Officer shall make a decision to deny or approve a renewal request no later than 45 days from the date of the final report submittal, unless the manufacturer and the Executive Officer agree to an extension of time for the Executive Officer to take action on the renewal request.

## A.6 MODIFICATION OF A PROGRAM

A manufacturer may request a modification of the Program at any time prior to the end of the compliance period. The Executive Officer shall take action to approve

or disapprove the modification request no longer than 45 days from the date of its submittal. No modification of the compliance period shall be allowed. A Program need not be modified to specify additional coatings to be averaged that are below the applicable VOC limits.

## A.7 TERMINATION OF A PROGRAM

A.7.1 A manufacturer may terminate its Program at any time by filing a written notification to the Executive Officer. The filing date shall be considered the effective date of the termination, and all other provisions of this Rule including the VOC limits shall immediately thereafter apply. The manufacturer shall also submit a final report 60 days after the termination date. Any exceedance of the actual emissions over the allowable emissions over the period that the Program was in effect shall constitute a separate violation for each day of the entire compliance period.

A.7.2 The Executive Officer may terminate a Program if any of the following circumstances occur:

A.7.2.1 The manufacturer violates the requirements of the approved Program, and at the end of the compliance period, the actual emissions exceed the allowable emissions.

A.7.2.2 The manufacturer demonstrates a recurring pattern of violations and has consistently failed to take the necessary steps to correct those violations.

## A.8 CHANGE IN VOC LIMITS

If the VOC limits of a coating listed in the Program are amended such that its effective date is less than one year from the date of adoption, the affected manufacturer may base its averaging on the prior limits of that coating until the end of the compliance period immediately following the date of adoption.

## A.9 LABELING

Each container of any coating that is included in averaging program, and that exceeds the applicable VOC limit in Table 433-1 shall display the following statement: "This product is subject to architectural coatings averaging provisions in California." A symbol specified by the Executive Officer may be used as a substitute.

## A.10 VIOLATIONS

The exceedance of the allowable emissions for any compliance period shall constitute a separate violation for each day of the compliance period. However, any violation of the requirements of the Averaging Provision of this Rule, which the violator can demonstrate, to the Executive Officer, did not cause or allow the

emission of an air contaminant and was not the result of negligent or knowing activity may be considered a minor violation.

## A.11 SUNSET OF AVERAGING PROVISION

The averaging provision set forth in Attachment 433-A shall cease to be effective on January 1, 2005, after which averaging will no longer be allowed.