

06- DEPARTMENT OF ENVIRONMENTAL PROTECTION

096 BUREAU OF AIR QUALITY CONTROL

**CHAPTER 151: ARCHITECTURAL AND INDUSTRIAL MAINTENANCE (AIM)
COATINGS**

SUMMARY: This regulation establishes limits for emissions of volatile organic compounds from architectural and industrial maintenance coatings.

1. Applicability

A. Except as provided in section 1(B), this regulation applies to any person who supplies, sells, offers for sale, or manufactures any architectural coating for use within the State of Maine and to any person who applies or solicits the application of any architectural coating within the State of Maine.

B. This regulation does not apply to:

(1) Any architectural coating that is sold or manufactured for use outside the State of Maine or for shipment to other manufacturers for reformulation or repackaging.

(2) Any aerosol coating product.

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

2. Definitions

A. Adhesive. “Adhesive” means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

B. Aerosol coating product. “Aerosol coating product” means 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/marketing applications.

C. Antenna coating. “Antenna coating” means a coating labeled and formulated exclusively for application to equipment and associated structural appurtenances that are used to receive or transmit electromagnetic signals.

D. Antifouling coating. “Antifouling coating” means 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 EPA under the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. section 136 *et seq.*) and with the State of Maine Board of Pesticides Control according to 7 MRSA §607.

E. Appurtenance. “Appurtenance” means 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; fire escapes; and window screens.

F. Architectural coating. “Architectural coating” means a coating to be applied to stationary structures and 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.

G. ASTM. “ASTM” means the American Society for Testing and Materials.

H. BAAQMD. “BAAQMD” means the Bay Area Air Quality Management District, a part of the California Air Resources Board (CARB) which regulates air quality in the State of California.

I. Bitumens. “Bitumens” means 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.

J. Bituminous roof coating. “Bituminous roof coating” means a coating which incorporates bitumens that is labeled and formulated exclusively for roofing.

K. Bituminous roof primer. “Bituminous roof primer” means a primer which incorporates bitumens that is labeled and formulated exclusively for roofing.

L. Bond breaker. “Bond breaker” means 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.

M. Calcimine recoaters. “Calcimine recoaters” means flat solvent borne coatings formulated and recommended specifically for recoating calcimine-painted ceilings and other calcimine-painted substrates.

N. Clear brushing lacquers. “Clear brushing lacquers” means 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 section 4(E).

O. Clear wood coatings. “Clear wood coatings” means clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates, to provide a transparent or translucent solid film.

P. Coating. “Coating” means 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.

Q. Colorant. “Colorant” means 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.

R. Concrete curing compound. “Concrete curing compound” means a coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water.

S. Concrete surface retarders. “Concrete surface retarders” means a mixture of retarding ingredients such as extender pigments, primary pigments, resin, and solvent that interact chemically with the cement to prevent hardening on the surface where the retarder is applied, allowing the retarded mix or cement and sand at the surface to be washed away to create an exposed aggregate finish.

T. Conversion varnish. “Conversion varnish” means a clear acid curing coating with an alkyd or other resin blended with amino resins and supplied as a single component or two-compound product. Conversion varnishes produce a hard, durable, clear finish designed for professional application to wood flooring. This film formation is the result of an acid-catalyzed condensation reaction, affecting a transesterification at the reactive ethers of the amino resins.

U. Dry fog coating. “Dry fog coating” means 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.

V. Exempt compound. “Exempt compound” means a compound as defined in Chapter 100 of the Department’s Regulations, as having negligible photochemical reactivity.

W. Faux finishing coating. “Faux finishing coating” means a coating labeled and formulated as a stain or a glaze to create artistic effects including, but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain.

X. Fire-resistive coating. “Fire-resistive coating” means 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 and 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 section 6(E)(2).

Y. Fire-retardant coating. “Fire-retardant coating” means a coating labeled and formulated to retard ignition and flame spread, that has been 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 section 6(E)(1).

Z. Flat coating. “Flat coating” means 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 section 6(E)(3).

AA. Floor coating. “Floor coating” means 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 subjected to foot traffic.

BB. Flow coating. “Flow coating” means a coating labeled and formulated exclusively for use to maintain the protective coating systems present on utility transformer units.

CC. Form-release compound. “Form-release compound” means 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.

DD. Graphic arts coating or sign paint. “Graphic arts coating or sign paint” means a coating labeled and formulated for hand-application using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals including letter enamels, poster colors, copy blockers, and bulletin enamels.

EE. High temperature coating. “High temperature coating” means a high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

FF. Impacted immersion coating. “Impacted immersion coating” means a high performance maintenance coating formulated and recommended for application to steel structures subject to immersion in turbulent, debris-laden water. These coatings are specifically resistant to high-energy impact damage by floating ice or debris.

GG. Industrial maintenance coating. “Industrial maintenance coating” means 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 and labeled as specified in section 4(D):

- (1) immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposures of interior surfaces to moisture condensation;
- (2) acute or chronic exposure to corrosive, caustic, or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;
- (3) repeated exposure to temperatures above 121°C (250°F);
- (4) repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleansers, or scouring agents; or
- (5) exterior exposure of metal structures and structural components.

HH. Lacquer. “Lacquer” means 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.

II. Low solids coating. “Low solids coating” means a coating containing 0.12 kilogram or less of solids per liter (one pound or less of solids per gallon) of coating material.

JJ. Magnesite cement coating. “Magnesite cement coating” means a coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

KK. Mastic texture coating. “Mastic texture coating” means a coating labeled and formulated to cover holes and minor cracks and conceal surface irregularities, which is applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.

LL. Metallic pigmented coating. “Metallic pigmented coating” means 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 South Coast Air Quality Management District Method 318-95, incorporated by reference in section 6(E)(4).

MM. Multi-color coating. “Multi-color coating” means a coating that is packaged in a single container and exhibits more than one color when applied in a single coat.

NN. Nonflat coating. “Nonflat coating” means a coating that is not defined under any other definition in this rule and 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 section 6(E)(3).

OO. Nonflat-high gloss coating. “Nonflat-high gloss coating” means 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 section 6(E)(3).

PP. 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.

QQ. Post-consumer coating. “Post-consumer coating” means 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.

RR. Pre-treatment wash primer. “Pre-treatment wash primer” means a primer that contains a minimum of 0.5 acid, by weight, when tested in accordance with ASTM Designation D 1613-96 (1999), incorporated by reference in section 6(E)(5), that is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.

SS. Primer. “Primer” means a coating labeled and formulated for application to a substrate to provide a firm bond between the substrate and subsequent coats.

TT. Quick-dry enamel. “Quick-dry enamel” means a nonflat coating that is labeled as specified in section 4(H) and that is formulated to have the following characteristics:

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

(2) when tested in accordance with ASTM Designation D 1640-95 (1999), incorporated by reference in section 6(E)(6), sets to touch in two hours or less, is tack free in four hours or less, and dries hard in eight hours or less by the mechanical test methods; and

(3) has a dried film gloss of 70 or above on a 60-degree meter.

UU. Quick-dry primer sealer and undercoater. “Quick-dry primer sealer and undercoater” means a primer sealer or undercoater that is dry to the touch in 30 minutes and can be re-coated in two hours when tested in accordance with ASTM Designation D 1640-95 (1999), incorporated by reference in section 6(E)(6).

VV. Recycled coating. “Recycled coating” means an architectural coating formulated such that not less than 50 percent of the weight consists of secondary and post-consumer coating, with not less than 10 percent of the total weight consisting of post-consumer coating.

WW. Roof coating. “Roof coating” means 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 in this category, but shall be considered to be in the metallic pigmented coatings category.

XX. Rust preventive coating. “Rust preventive coating” means a coating

formulated exclusively for nonindustrial use to prevent the corrosion of metal surfaces and labeled as specified in section 4(F).

YY. Sanding sealer. “Sanding sealer” means 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 it is included in the lacquer category.

ZZ. SCAQMD. “SCAQMD” means the South Coast Air Quality Management District, a part of the California Air Resources Board (CARB), which is responsible for regulation of air quality in the State of California.

AAA. Sealer. “Sealer” means 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.

BBB. Secondary coating (rework). “Secondary coating (rework)” means 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.

CCC. Shellac. “Shellac” means a clear or opaque coating formulated solely with the resinous secretions of the lac beetle (*Lacififer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

DDD. Shop application. “Shop application” means the 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).

EEE. Solicit. “Solicit” means to require for use or to specify by written or oral contract.

FFF. Specialty primer, sealer and undercoater. “Specialty primer, sealer and undercoater” means a coating labeled as specified in section 4(G) 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 section 6(E)(7).

GGG. Stain. “Stain” means a clear, semi-transparent or opaque coating labeled

and formulated to change the color of a surface, but not conceal the grain pattern or texture.

HHH. Swimming pool coating. “Swimming pool coating” means a coating labeled and formulated to coat the interior of swimming pools and resist swimming pool chemicals.

III. Swimming pool repair and maintenance coating. “Swimming pool repair and maintenance coating” means a rubber-based coating labeled and formulated to be used over existing rubber-based coatings for the repair and maintenance of swimming pools.

JJJ. Temperature-indicator safety coating. “Temperature-indicator safety coating” means 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).

KKK. Thermoplastic rubber coating and mastic. “Thermoplastic rubber coating and mastic” means a coating or mastic formulated and recommended for application to roofing or other structural surfaces and that incorporates no less than 40 percent by weight of thermoplastic rubbers in the total resin solids and may also contain other ingredients including, but not limited to, fillers, pigments, and modifying resins.

LLL. Tint base. “Tint base” means an architectural coating to which colorant is added, after packaging in sale units, to produce a desired color.

MMM. Traffic marking coating. “Traffic marking coating” means 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.

NNN. Undercoater. “Undercoater” means a coating labeled and formulated to provide a smooth surface for subsequent coatings.

OOO. Varnish. “Varnish” means a clear or semi-transparent wood coating, excluding lacquers and shellacs, formulated to dry by chemical reaction. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.

PPP. VOC content. “VOC content” means the weight of VOC per volume of coating, calculated according to the procedures specified in section 6(A).

QQQ. Waterproofing sealer. “Waterproofing sealer” means a coating labeled and formulated for application to a porous substrate for the primary purpose of preventing the penetration of water.

RRR. Waterproofing concrete/masonry sealer. “Waterproofing concrete/masonry sealer” means 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.

SSS. Wood preservative. “Wood preservative” means a coating labeled and formulated to protect exposed wood from decay or insect attack, that is registered under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. section 136, *et. seq.*) and with the State of Maine Board of Pesticides Control according to 7 MRSA §607.

3. Standards

A. VOC content limits. Except as provided in section 3(B), 3(C), and 3(H), no person shall: (1) manufacture, blend or repackage for sale within the State of Maine, (2) supply, sell, or offer for sale within the State of Maine, or (3) solicit for application or apply within the State of Maine, any architectural coating manufactured on or after January 1, 2006 which contains volatile organic compounds in excess of the limits specified in the following Table of Standards. Limits are expressed in grams of VOC per liter 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.

Table of Standards – VOC Content Limits for Architectural Coatings

Coating category	VOC Content Limit grams VOC per liter
Flat coatings	100
Nonflat coatings	150
Nonflat – high gloss coatings	250
Antenna coatings	530
Antifouling coatings	400

Bituminous roof coatings	300
Bituminous roof primers	350
Bond breakers	350
Calcimine recoaters	475
Clear wood coatings	
▪ Clear brushing lacquers	680
▪ Lacquers (including lacquer sanding sealers)	550
▪ Sanding sealers (other than lacquer sanding sealers)	350
▪ Varnishes	350
▪ Conversion varnishes	725
Concrete curing compounds	350
Concrete surface retarders	780
Dry fog coatings	400
Faux finishing coatings	350
Fire resistive coatings	350
Fire retardant coatings	
▪ Clear	650
▪ Opaque	350
Floor coatings	250
Flow coatings	420
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Impacted immersion coatings	780
Industrial maintenance coatings	340
Low solids coatings	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 preventive coatings	400
Shellacs:	
▪ Clear	730
▪ Opaque	550
Specialty primers, sealers, and undercoaters	350
Stains	250
Swimming pool coatings and swimming pool repair and maintenance coatings	340
Temperature-indicator safety coatings	550
Thermoplastic rubber coatings and mastics	550
Traffic marking coatings	150
Waterproofing sealers	250
Waterproofing concrete/masonry sealers	400
Wood preservatives	350

B. Most restrictive VOC limit. If anywhere on the container of any architectural coating, or any label sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on the manufacturer's behalf, including retailers who sell under a private label, representation is made that the coating meets the definition of or is recommended for use or may be used for more than one of the coating categories listed in section 3(A), then the most restrictive VOC content limit shall apply. This provision does not apply to the coating categories listed below:

- (1) antenna coatings;
- (2) antifouling coatings;
- (3) bituminous roof primers;

- (4) calcimine recoaters;
- (5) fire-retardant coatings;
- (6) flow coatings;
- (7) high temperature coatings;
- (8) impacted immersion coatings;
- (9) industrial maintenance coatings;
- (10) lacquer coatings (including lacquer sanding sealers);
- (11) low-solids coatings;
- (12) metallic pigmented coatings;
- (13) pretreatment wash primers;
- (14) shellacs;
- (15) specialty primers, sealers, and undercoaters;
- (16) temperature-indicator safety coatings;
- (17) thermoplastic rubber coatings and mastics; and
- (18) wood preservatives.

C. Sell-through of architectural or industrial maintenance coatings. An architectural or industrial maintenance coating manufactured prior to January 1, 2006, may be sold, supplied, or offered for sale for up to three years after the January 1, 2006 compliance date, i.e. until January 1, 2009. A coating manufactured prior to January 1, 2006 may be applied at any time, both before and after January 1, 2006, so long as the architectural or industrial maintenance coating complied with the standards in effect at the time the coating was manufactured. This does not apply to any coating that does not display the date code required by section 4(A).

D. Painting practices. Any person who applies architectural coatings shall ensure that all containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing or rolling, padding, ragging or other

means shall be closed when not in use. These architectural coatings 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.

E. Thinning. No person who applies or solicits the application or any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in section 3(A).

F. Rust preventive coatings. No person shall apply or solicit the application of any rust preventive coating for industrial use, unless such a rust preventive coating complies with the industrial maintenance coating VOC limit specified in section 3(A).

NOTE: Facilities that apply coatings in a shop application may be subject to the Department's Chapter 129, Surface Coating Facilities regulation concerning coatings of miscellaneous metal parts or other materials.

G. Coatings not listed in section 3(A). For any coating that does not meet any of the definitions for the specialty coatings categories listed in section 3(A), the VOC content limit shall be determined by classifying the coating as a flat coating, nonflat coating, or nonflat-high gloss coating as those terms are defined in sections 2(Z), (OO), and (PP) and the corresponding flat or nonflat coating limit shall apply.

H. Lacquers. Notwithstanding the provisions of section 3(A), a person or facility may add up to 10% by volume of VOC to a lacquer to avoid blushing of the finish during days with relative humidity greater than 70% 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.

4. Container labeling requirements

Any architectural coatings subject to this rule sold or distributed for sale in the State of Maine on or after January 1, 2006 shall display the information listed in section 4(A)-(I) on the coating container (or label affixed thereto) in which the coating is sold or distributed.

A. 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 Department by January 1, 2006 or within 90 days of making the product available for sale in Maine.

B. 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.

C. 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 section 6(B). The equations in section 6(A) shall be used to calculate VOC content.

D. Industrial maintenance coatings. Each container of any industrial maintenance coating subject to this rule shall display on the label or the lid of the container in which the coating is sold or distributed one or more of the descriptions listed below:

(1) "For industrial use only".

(2) "For professional use only".

(3) "Not for residential use" or "Not intended for residential use".

E. Clear brushing lacquers. 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".

F. Rust preventive coatings. The labels of all rust preventive coatings shall prominently display the statement "For metal substrates only".

G. Specialty primers, sealers and undercoaters. The labels of all specialty primers, sealers and undercoaters shall prominently display one or more of the descriptions listed below:

- (1) “For blocking stains”.
- (2) “For fire-damaged substrates”.
- (3) “For smoke-damaged substrates”.
- (4) “For water-damaged substrates”.
- (5) “For excessively chalky substrates”.

H. Quick dry enamels. The labels of all quick dry enamels shall prominently display the words “Quick dry” and the dry hard time.

I. Non-flat high-gloss coatings. The labels of all non-flat high-gloss coatings shall prominently display the words “High gloss”.

5. Reporting requirements

A. Each manufacturer of a product subject to a VOC content limit in section 3(A) shall keep records demonstrating compliance with the VOC content limits. Such records shall clearly list each product by name (and identifying number, if applicable) as shown on the product label and in applicable sales and technical literature, the VOC content as determined in section 6(A) and 6(B), the name(s) and chemical abstract service (CAS) number of the VOC constituents in the product, the dates of the VOC content determinations, and the coating category and the applicable VOC content limit. These records shall be kept for a period not less than five years and shall be made available to the Department within 90 days of request.

B. A responsible official from each manufacturer shall upon request of the commissioner provide data concerning the distribution and sales of coatings subject to a VOC content limit in section 3(A). The responsible official shall within 90 days provide information including, but not limited to:

- (1) the name and mailing address of the manufacturer;
- (2) the name, address and telephone number of a contact person;
- (3) the name of the product as it appears on the label and the coating category in section 3(A) under which it is regulated;
- (4) whether it is marketed for interior or exterior use or both;

- (5) the number of gallons sold in Maine in containers greater than one liter;
- (6) the number of gallons sold in Maine in containers of one liter or less;
- (7) the actual VOC content and VOC content limit in grams per liter. If thinning is recommended, list the actual VOC content and VOC content limit after recommended thinning. If containers of one liter or less have a different VOC content than containers greater than one liter, list separately;
- (8) the names and CAS number of the VOC constituents in the product; and
- (9) the names and CAS number of any exempt compounds in the product.

6. Compliance provisions and test methods

A. Calculation of VOC content. For the purpose of determining compliance with section 4(C), the VOC content of a coating shall be determined by using the procedures described in sections 6(A)(1) and 6(A)(2), as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.

- (1) 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 the following equation:

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

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

(2) 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 the following equation:

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

Where:

VOC Content (ls) = the VOC content of a low solids coating in grams 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

B. VOC content of coatings. To determine the physical properties of a coating in order to perform the calculations in section 6(A), the reference method for VOC content is U.S. EPA Method 24 (40 CFR Part 60, Appendix A), incorporated by reference in section 6(E)(11), except as provided in section 6(C) and 6(D). An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996), incorporated by reference in section 6(E)(12).

To determine the VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method, as provided in section 6(C), 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 results will govern, except when an alternative method is approved as specified in section 6(C). The Department may require the manufacturer to conduct a Method 24 analysis.

Exempt compound content shall be determined by SCAQMD Method 303-91 (Revised August 1996), incorporated by reference in section 6(E)(10). The exempt compound parachlorobenzotrifluoride (PCBTF) shall be determined by BAAQMD Method 41, incorporated by reference in section 6(E)(9). Exempt compounds that are cyclic, branched, or linear,

completely methylated siloxanes, shall be determined by BAAQMD Method 43, incorporated by reference in section 6(E)(8).

I. Alternative test methods. Other test methods demonstrated to provide results that are acceptable for the purposes of determining compliance with section 6(B), after review and approval in writing by the Department and EPA, also may be used.

J. Methacrylate traffic coating markings. Analysis of methacrylate multi-component coatings used as traffic marking coatings shall be conducted according to a modification of U.S. EPA Method 24 (40 CFR Part 59, subpart D, Appendix A), incorporated by reference in section 6(E)(13). This method has not been approved for methacrylate multi-component coatings used for purposes other than as traffic marking coatings or for other classes of multi-component coatings.

K. 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:

(1) Flame spread index. The flame spread index of a fire-retardant coating shall be determined by the ASTM Designation E 84-99, "Standard Test Methods for Surface Burning Characteristics of Building Materials".

(2) 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".

(3) 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 2, flat coating, non-flat coating, non-flat-high gloss coating, quick-dry enamel).

(4) 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 2, metallic pigmented coating.)

(5) 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 2, pre-treatment wash primer).

(6) Drying times. The set-to-touch and dry-to-recoat times of a coating shall be determined by ASTM Designation D 1640-95, "Standard Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature" (see section 2, 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 D 1640-95.

(7) 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 2, specialty primer, sealer and undercoater).

(8) Exempt compounds-siloxanes. Exempt compounds that are cyclic, branched or linear, completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with this section by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials", BAAQMD Manual of Procedures, Volume III, adopted November 6, 1996.

(9) Exempt compounds-parachlorobenzotrifluoride (PCBTF). The exempt compound parachlorobenzotrifluoride shall be analyzed as an exempt compound for compliance with this section 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 December 20, 1995.

(10) Exempt compounds. The content of compounds exempt under EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), "Determination of Exempt Compounds", found in SCAQMD "Laboratory Methods of Analysis for Enforcement Samples".

(11) VOC content of coatings. The VOC content of a coating shall be determined by EPA Method 24 found in "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings.

(12) Alternative VOC content of coatings. The VOC content of coatings may be analyzed by either EPA Reference Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials, found in "SCAQMD Laboratory Methods of Analysis for Enforcement Samples".

(13) 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 Coatings", (September 11, 1998).

7. Test Method Availability

(A) ASTM methods can be purchased from American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428- 2959. Telephone (610) 832-9585. Fax (610) 832-9555. www.astm.org.

(b) SCAQMD methods can be purchased from South Coast Air Quality Management District, 21865 East Copley Drive, Diamond Bar, California 91765-0934. Telephone (909) 396-2162. www.aqmd.gov.

8. Compliance Schedule

Unless otherwise noted, any person subject to the requirements of this Chapter shall be in compliance with all of the applicable provisions of this Chapter upon the effective date of the regulation.

AUTHORITY	38 M.R.S.A., Section 585-A
EFFECTIVE DATE	December 28, 2004

BASIS STATEMENT

This rule, which is based on an Ozone Transport Commission (OTC) model rule, reduces volatile organic compound (VOC) emissions from architectural and industrial maintenance (AIM) coatings by setting VOC content limits for a variety of AIM products. VOCs react with nitrogen oxides in the presence of sunlight to form ozone, which is responsible for exacerbating a variety of respiratory ailments, such as asthma.

In addition to the Basis Statement above, the Department has filed with the Secretary of State a response to comments received during the comment period.