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

9VAC5 CHAPTER 40.
EXISTING STATIONARY SOURCES.

PART II.
Emission Standards.

ARTICLE 59.
Emission Standards for Miscellaneous Metal Parts and Products Coating Application Systems in the Northern Virginia Volatile Organic Compound Emissions Control Area, 8-hour Ozone Standard (Rule 4-59).

9VAC5-40-8810. Applicability and designation of affected facility.

A. Except as provided in subsections C through H of this section, the affected facility to which the provisions of this article apply is each miscellaneous metal product and plastic parts surface coating operation at a facility where the total actual emissions of volatile organic compounds (VOCs) from all miscellaneous metal product and plastic parts surface coating operations, including related cleaning activities, at that facility are equal to or exceed 6.8 kilograms per day (15 pounds per day), or an equivalent level of 2.7 tons per 12-month rolling period, before consideration of controls.

B. The provisions of this article apply only to affected facilities located in the Northern Virginia VOC Emissions Control Area designated in subdivision 1a of 9VAC5-20-206.

C. Facilities that coat bodies or body parts for new heavier vehicles (including all vehicles that meet the definition of the term "other motor vehicles" as defined in 40 CFR 63.3176 of the National Emission Standards for Surface Coating of Automobile and Light-Duty Trucks) may, in lieu of complying with the provisions of this article, opt to comply with Article 28 (Emission Standards For Automobile and Light Duty Truck Coating Application Systems, 9VAC5-40-3860 et seq.) of 9VAC5-40 (Existing Stationary Sources).

D. The provisions of this article do not apply to the following:

1. Miscellaneous metal product and plastic parts surface coating operations subject to Article 26 (Emissions Standards for Large Appliance Coating Application Systems, 9VAC5-40-3560 et seq.), Article 27 (Emission Standards For Magnet Wire Coating Application Systems, 9VAC5-40-3710 et seq.), Article 29 (Emission Standards For Can Coating Application Systems, 9VAC5-40-4010 et seq.), Article 30 (Emission Standards For Metal Coil Coating Application Systems, 9VAC5-40-4160), Article 31 (Emission Standards For Paper and Fabric Coating Application Systems, 9VAC5-40-4310), Article 33 (Metal Furniture Coating Application Systems, 9VAC5-40-4610 et seq.),and Article 48 (Emission Standards for Mobile Equipment Repair and Refinishing Operations, 9VAC5-40-6970 et seq.) of 9VAC5-40 (Existing Stationary Sources); and Article 5 (Emission Standards for Architectural and Industrial Maintenance Coatings, 9VAC5-45-520 et seq.) of 9VAC5-45 (Consumer and Commercial Products).

2. Coating application systems used exclusively for determination of product quality and coatings that are applied to test panels and coupons as part of research and development, quality control, or performance testing activities at paint research or manufacturing facilities.

3. Coatings applied using a hand-held, pressurized, non-refillable container which expels coatings from the container in a finely divided spray when a valve on the container is depressed.

4. Miscellaneous metal product and plastic parts surface coating operations associated with the following product categories or processes: aerospace coatings; wood furniture coatings; fiberglass boat manufacturing materials; and paper, film, and foil coatings not otherwise regulated under Article 31 (Emission Standards for Paper and Fabric Coating Application Systems, 9VAC5-40-4310) of 9VAC5-40 (Existing Stationary Sources).

5. Recommended VOC limits and application methods do not apply to aerosol coating products or powder coatings.

E. For metal coatings:

1. . Recommended work practices still apply, however, the VOC limits and application methods for provisions of this article do not apply to the following:

a. Stencil coatings;

b. Safety-indicating coatings;

c Solid-film lubricants;

d. Electric-insulating and thermal conducting coatings;

e. Magnetic data storage disk coatings; and

f. Plastic extruded onto metal parts to form a coating.

2. Recommended VOC limits and work practices still apply to these coatings and coating operations, however, the application methods for provisions of this article do not apply to the following:

a. Touch-up coatings;

b. Repair coatings; and

c. Textured finishes.

F. For plastic coatings:

1. Recommended application and work practices still apply to these coatings and coating operations, however, the VOC limits for provisions of this article do not apply to the following:

a. Touch-up and repair coatings;

b. Stencil coatings applied on clear or transparent substrates;

c. Clear or translucent coatings;

d. Coatings applied at a paint manufacturing facility while conducting performance tests on the coatings;

e. Any individual coating category used in volumes less than 50 gallons in any one year, if substitute complaint coatings are not available, provided that the total usage of all such coatings does not exceed 200 gallons per year, per facility;

f. Reflective coating applied to highway cones;

g. Mask coatings that are less than 0.5 millimeter thick (dried) and the area coated is less than 25 square inches;

h. EMI/RF shielding coatings; and

i. Heparin-benzalkonium chloride (HBAC)-contained coatings applied to medical devices, provided that the total usage of all such coatings does not exceed 100 gallons per year, per facility.

2. The application methods for provisions of this article do not apply to airbrush methods using 5 gallons or less per year of coating, however, VOC limits and work practices do apply.

G. For automotive/transportation and business machine plastic part coatings:

1. The VOC limits for provisions of this article do not apply to the following:

a. Texture coatings;

b. Vacuum metalizing coatings;

c. Gloss reducers;

d. Texture topcoats;

e. Adhesion primers;

f. Electrostatic preparation coatings;

g. Resist coatings; and

h. Stencil coatings.

2. Recommended application and work practices still apply to these coatings and coating operations.

H. For pleasure craft surface coating operations, VOC limits and work practices do apply to extreme high gloss coatings, however, recommended application methods do not apply.

9VAC5-40-8820. Definitions.

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

B. As used in this article, all terms not defined here shall have the meaning given them in 9VAC5-10 (General Definitions), unless otherwise required by context.

C. Terms defined.

"Aerospace coatings" means materials that are applied to the surface of an aerospace vehicle or component to form a decorative, protective, or functional solid

film, or the solid film itself at a facility that produces, reworks, or repairs in any amount any commercial, civil, or military aerospace vehicle or component.

"Air-dried coating" means:

1. For general use, a coating that is cured at a temperature below 90°C (194°F).

2. For automotive/transportation and business machine use, a coating that is dried by the use of air or forced warm air at temperatures up to 90°C (194°F).

"Antifoulant coating" means any coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the U.S. Environmental Protection Agency (EPA) as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 USC § 136).

“Antifouling Sealer/Tie Coat" means any coating applied over biocidal antifouling coating for the purpose of preventing release of biocides into the environment and/or to promote adhesion between an antifouling and a primer or other antifoulings.”

"Baked coating" means a coating that is cured at a temperature at or above 90°C (194°F).

"Black automotive coating" means a coating that meets both of the following criteria: (i) maximum lightness of 23 units and (ii) saturation of less than 2.8, where saturation equals the square root of $A^2 + B^2$. These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, maximum lightness is 33 units.

"Biocide" means a chemical substance or microorganism which can deter, render harmless, or exert a controlling effect on any harmful organism by chemical or biological means.

"Business machine" means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information or convert sound into electrical impulses for transmission, including devices listed in National American Industry Classification System (NAICS) codes 333318, 334111, 339940, 334112, 334118, 334210, 334418, 334519, 334613 and photocopying equipment in 333316.

"Camouflage coating" means a coating used, principally by the military, to conceal equipment from detection.

"Clear coating" means:

1. For general use, a colorless coating that contains binders, but no pigment, and is formulated to form a transparent film.

2. For automotive/transportation and business machine use, a coating that lacks color and opacity or is transparent and that uses the undercoat as a reflectant base or undertone color.

"Coating unit" means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried, or cured. A coating unit ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating. It is not necessary for a coating unit to have an oven or flash-off area.

"Drum" means any cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.

"Electric dissipating coating" means a coating that rapidly dissipates a high-voltage electric charge.

"Electric-insulating varnish" means a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

"EMF/RFI shielding" means a coating used on electrical or electronic equipment to provide shielding against electromagnetic interference, radio frequency interference , or static discharge.

"Etching filler" means a coating that contains less than 23% solids by weight and at least 0.5% acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

"Extreme high-gloss coating" means:

1. For general use, a coating that, when tested by the American Society for Testing and Materials (ASTM) Standard Test Method for Specular Gloss (see 9VAC5-20-21), shows a reflectance of 75 or more on a 60° meter.

2. For pleasure craft surface coating, any coating that achieves at least 95% reflectance on a 60° meter when tested by ASTM Standard Test Method for Specular Gloss (see 9VAC5-20-21).

"Extreme performance coating" means a coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to the following:

1. Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solutions;

2. Repeated exposure to temperatures in excess of 250°F; or

3. Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers or scouring agents.

Extreme performance coatings include, but are not limited to, coatings applied to locomotives, railroad cars, farm machinery, and heavy duty trucks.

"Fiberglass boat manufacturing materials" means materials utilized at facilities that manufacture hulls or decks of boats from fiberglass, or build molds to make fiberglass boat hulls or decks. Fiberglass boat manufacturing materials are not materials used at facilities that manufacture solely parts of boats (such as hatches, seats, or lockers) or boat trailers, but do not (i) manufacture hulls or decks of boats from fiberglass, or (ii) build molds to make fiberglass boat hulls or decks.

"Finish primer/surfacer" means a coating applied with a wet film thickness of less then 10 mils prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

"Flexible coating" means any coating that is required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

"Fog coat" means a coating that is applied to a plastic part for the purpose of color matching without masking a molded-in texture. A fog coat shall not be applied at a thickness of more than 0.5 mils of coating solids.

"Heat-resistant coating" means a coating that must withstand a temperature of at least 400°F during normal use.

"High bake coating" means a coating that is designed to cure only at temperatures of more than 90°C (194°F).

"High build primer/surfacer" means a coating applied with a wet film thickness of 10 mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

"High gloss" means any coating that achieves at least 85% reflectance on a 60° meter when tested by ASTM Standard Test Method for Specular Gloss (see 9VAC5-20-21).

"High performance architectural coating" means a coating used to protect architectural subsections and that meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).

"High temperature coating" means a coating that is certified to withstand a temperature of 1000°F for 24 hours.

"Metallic coating" means a coating that contains more than five grams of metal particles per liter of coating as applied. "Metal particles" are pieces of a pure elemental metal or a combination of elemental metals.

"Military specification coating" means a coating that has a formulation approved by a United States military agency for use on military equipment.

"Miscellaneous metal parts and products" means a varied range of metal and plastic parts and products that are constructed either entirely or partially from metal or plastic. These miscellaneous metal products and plastic parts include, but are not limited to, metal and plastic components of the following types of products as well as the products themselves: fabricated metal products, molded plastic parts, small and large farm machinery, commercial and industrial machinery and equipment, automotive or transportation equipment, interior or exterior automotive parts, construction equipment, motor vehicle accessories, bicycles and sporting goods, toys, recreational vehicles, pleasure craft (recreational boats), extruded aluminum structural components, railroad cars, heavier vehicles (as defined in 40 CFR 63.3176), lawn and garden equipment, business machines, laboratory and medical equipment, electronic equipment, steel drums, metal pipes, and numerous other industrial and household products.

"Miscellaneous metal product and plastic parts coating" means coatings that include paints, sealants, caulks, inks, and maskants (decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances are not considered miscellaneous metal or plastic part coatings). The paints include several categories of primers, topcoats, and specialty coatings, typically defined by the coating’s function. The types of coating technologies used by miscellaneous metal product and plastic part surface coating facilities include higher solids, waterborne, and powder coatings, as well as conventional solvent-borne coatings. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances are not considered miscellaneous metal or plastic part coatings.

"Miscellaneous metal product and plastic parts surface coating operation" means the application of surface coatings by the manufacturer of miscellaneous metal and plastic parts to the parts it produces, and by facilities that perform surface coating of miscellaneous metal and plastic parts on a contract basis.

"Mold seal coating" means the initial coating applied to a new mold or a repaired mold to provide a smooth surface that, when coated with a mold release coating, prevents products from sticking to the mold.

"Motor vehicle bedliner" means a multi-component coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance.

"Motor vehicle cavity wax" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

"Motor vehicle deadener" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

"Motor vehicle gasket/sealing material" means a fluid, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization (RTV) seal material.

"Motor vehicle lubricating wax/compound" means a protective lubricating material, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to vehicle hubs and hinges.

"Motor vehicle sealer" means a high viscosity material, used at a facility that is not an automobile or light-duty truck assembly coating facility, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

"Motor vehicle trunk interior coating" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the trunk interior to provide chip protection.

"Motor vehicle underbody coating" means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the undercarriage or firewall to prevent corrosion or provide chip protection.

"Multi-colored coating" means a coating that exhibits more than one color when applied, and which is packaged in a single container and applied in a single coat.

"Multi-component coating" means a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

"One-component coating" means a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

"Optical coating" means a coating applied to an optical lens.

"Pan-backing coating" means a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

"Paper, film and foil coating" means coating that is applied to paper, film, or foil surfaces in the manufacturing of several major product types for the following industry sectors: pressure sensitive tape and labels (including fabric coated for use in pressure sensitive tapes and labels); photographic film; industrial and decorative laminates; abrasive products (including fabric coated for use in abrasive products); and flexible packaging (including coating of non-woven polymer substrates for use in flexible packaging). Paper and film coating also includes coatings applied during miscellaneous coating operations for several products including: corrugated and solid fiber boxes; die-cut paper paperboard, and cardboard; converted paper and paperboard not elsewhere classified; folding paperboard boxes, including sanitary boxes; manifold business forms and related products; plastic aseptic packaging; and carbon paper and inked ribbons.

"Pleasure craft" means vessels that are manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person or business for recreational purposes. The owner of such vessels shall be responsible for certifying that the intended use is for recreational purposes.

"Pleasure craft coating" means any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

"Prefabricated architectural component coatings" means coatings applied to metal parts and products that are to be used as an architectural structure.

"Pretreatment coating" means a coating that contains no more than 12% solids by weight, and at least 0.5% acids, by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

"Pretreatment wash primer" means a coating that contains no more than 12% solids, by weight, and at least 0.5% acids, by weight; is used to provide surface etching; and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

"Red automotive coating" means a coating that meets all of the following criteria:

1. Yellow limit: the hue of hostaperm scarlet.

2. Blue limit: the hue of monastral red-violet.

3. Lightness limit for metallics: 35% aluminum flake.

4. Lightness limit for solids: 50% titanium dioxide white.

5. Solid reds: hue angle of -11 to 38 degrees and maximum lightness of 23 to 45 units.

6. Metallic reds: hue angle of -16 to 35 degrees and maximum lightness of 28 to 45 units.

These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, the upper limit is 49 units. The maximum lightness varies as the hue moves from violet to orange. This is a natural consequence of the strength of the colorants, and real colors show this effect.

"Repair coating" means a coating used to re-coat portions of a previously coated product that has sustained mechanical damage to the coating following normal coating operations.

"Shock-free coating" means a coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being of low capacitance and high resistance, and having resistance to breaking down under high voltage.

"Silicone release coating" means any coating that contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

"Solar-absorbent coating" means a coating that has as its prime purpose the absorption of solar radiation.

"Texture coating" means a coating that is applied to a plastic part that, in its finished form, consists of discrete raised spots of the coating.

"Topcoat" means any final coating applied to the interior or exterior of a pleasure craft.

"Touchup coating" means a coating used to cover minor coating imperfections appearing after the main coating operation.

"Vacuum-metalizing coating means:

1. For general use, the undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film. Vacuum metalizing/physical vapor deposition (PVD) is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

2. For automotive/transportation and business machine use, topcoats and basecoats that are used in the vacuum-metalizing process.

"VOC" means volatile organic compound.

"Wood furniture coatings" means protective, decorative, or functional films applied in thin layers to a surface used in the manufacture of wood furniture or wood

furniture components. Such coatings include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, enamels, inks, and temporary protective coatings.

9VAC5-40-8830. Standard for volatile organic compounds.

A. No owner or other person shall cause or permit the discharge into the atmosphere from a coating application system any volatile organic compound in excess of the limits contained in Tables 4-59A through 4-59E. The VOC content limits are mass VOC per gallon of coating less water and exempt solvents, and are based on low-VOC coatings. If more than one emission limitation in this subsection applies to a specific coating, then the least-stringent emission limitation shall be applied.

TABLE 4-59A.
METAL PARTS AND PRODUCTS VOC CONTENT LIMITS

Coating Category	Air-dried Coating		Baked Coating	
	kg VOC/l coating	lb VOC/gal coating	kg VOC/l coating	lb VOC/gal coating
General one component	0.34	2.8	0.28	2.3
General multi-component	0.34	2.8	0.28	2.3
Camouflage	0.42	3.5	0.42	3.5
Electric-insulating varnish	0.42	3.5	0.42	3.5
Etching filler	0.42	3.5	0.42	3.5
Extreme high-gloss	0.42	3.5	0.36	3.0
Extreme performance	0.42	3.5	0.36	3.0
Heat-resistant	0.42	3.5	0.36	3.0
High performance architectural]	0.74	6.2	0.74	6.2
High temperature	0.42	3.5	0.42	3.5
Metallic	0.42	3.5	0.42	3.5
Military specification	0.34	2.8	0.28	2.3
Mold seal	0.42	3.5	0.42	3.5
Pan-backing	0.42	3.5	0.42	3.5
Prefabricated architectural multi-component	0.42	3.5	0.28	2.3
Prefabricated architectural one-component	0.42	3.5	0.28	2.3
Pretreatment	0.42	3.5	0.42	3.5

coatings				
Repair and touch- up	0.42	3.5	0.36	3.0
Silicone release	0.42	3.5	0.42	3.5
Solar-absorbent	0.42	3.5	0.36	3.0
Vacuum-metalizing	0.42	3.5	0.42	3.5
Drum coating, new, exterior	0.34	2.8	0.34	2.8
Drum coating, new, interior	0.42	3.5	0.42	3.5
Drum coating, reconditioned, exterior	0.42	3.5	0.42	3.5
Drum coating, reconditioned, interior	0.50	4.2	0.50	4.2

TABLE 4-59B. PLASTIC PARTS AND PRODUCTS VOC CONTENT LIMITS

Coating Category	kg VOC/liter coating	lbs VOC/gal coating
General one component	0.28	2.3
General multi- component	0.42	3.5
Electric dissipating and shock-free	0.80	6.7
Extreme performance	0.42 (2-pack coatings/multi-component)	3.5 (2-pack coatings/multi-component)
Metallic	0.42	3.5
Military specification	0.34 (1 pack/1 component) 0.42 (2 pack/multi-component)	2.8 (1 pack/1 component) 3.5 (2 pack/multi-component)
Mold seal	0.76	6.3
Multi-colored	0.68	5.7
Optical	0.80	6.7
Vacuum-metalizing	0.80	6.7

TABLE 4-59C. AUTOMOTIVE/TRANSPORTATION AND BUSINESS MACHINE PLASTIC PARTS VOC CONTENT LIMITS

Coating Category	kg VOC/liter coating	lbs VOC/gal coating
Automotive/Transportation Coatings (For red, yellow, and black automotive coatings, except touch up and repair coatings, the recommended limit is determined by multiplying the appropriate limit in this table by 1.15.)		
I. High Bake Coatings - Interior and Exterior Parts		
Flexible	0.54	4.5
Nonflexible	0.42	3.5
Base coating	0.52	4.3
Clear coating	0.48	4.0

Non-basecoat/clear coat	0.52	4.3
II. Low Bake/Air-dried Coatings - Exterior Parts		
Primers	0.58	4.8
Base coating	0.60	5.0
Clear coating:	0.54	4.5
Non-base coat/clear coat	0.60	5.0
III. Low Bake/Air-dried Coatings - Interior Parts	0.60	5.0
IV. Touchup and Repair Coatings	0.62	5.2
Business Machine Coatings		
I. Primers	0.35	2.9
II. Topcoat	0.35	2.9
III. Texture Coat	0.35	2.9
IV. Fog Coat	0.26	2.2
V. Touchup and Repair	0.35	2.9

TABLE 4-59D. PLEASURE CRAFT SURFACE COATING VOC CONTENT LIMITS

Coating Category	kg VOC/liter coating	lbs VOC/gal coating
Extreme high gloss top coat	0.60	5.0
High gloss topcoat	0.42	3.5
Pretreatment wash primers	0.78	6.5
Finish primer/surfacer	0.42	3.5
High build primer/surfacer	0.34	2.8
Aluminum substrate antifoulant coating	0.56	4.7
Antifouling sealer/tie coat	0.42	3.5
Other substrate antifoulant coating	0.33	2.8
All other pleasure craft surface coatings for metal or plastic	0.42	3.5

TABLE 4-59E. MOTOR VEHICLE MATERIALS VOC CONTENT LIMITS

Coating Category	kg VOC/liter coating	lbs VOC/gal coating
Motor vehicle cavity wax	0.65	5.4
Motor vehicle sealer	0.65	5.4
Motor vehicle deadener	0.65	5.4
Motor vehicle gasket/gasket sealing material	0.20	1.7
Motor vehicle underbody coating	0.65	5.4
Motor vehicle trunk interior coating	0.65	5.4
Motor vehicle bedliner	0.20	1.7
Motor vehicle lubricating	0.70	5.8

wax/compound		

B. No owner or other person shall cause or permit the discharge into the atmosphere from a coating application system any volatile organic compound in excess of the limits contained in Tables 4-59F through 4-59I. The emission rate limits are based on low-VOC coatings and add-on controls on a VOC per volume solids basis. If more than one emission limitation in this subsection applies to a specific coating, then the least stringent emission limitation shall be applied.

TABLE 4-59F.
METAL PARTS AND PRODUCTS VOC EMISSION RATE LIMITS
(VOC PER VOLUME SOLIDS)

Coating Category	Air- dried		Baked	
	kg VOC/l solids	lb VOC/gal solids	Kg VOC/l solids	lb VOC/gal solids
General one component	0.54	4.52	0.40	3.35
General multi-component	0.54	4.52	0.40	3.35
Camouflage	0.80	6.67	0.80	6.67
Electric-insulating varnish	0.80	6.67	0.80	6.67
Etching filler	0.80	6.67	0.80	6.67
Extreme high-gloss	0.80	6.67	0.61	5.06
Extreme performance	0.80	6.67	0.61	5.06
Heat-resistant	0.80	6.67	0.61	5.06
High performance architectural	4.56	38.0	4.56	38.0
High temperature	0.80	6.67	0.80	6.67
Metallic	0.80	6.67	0.80	6.67
Military specification	0.54	4.52	0.40	3.35
Mold-seal	0.80	6.67	0.80	6.67
Pan-backing	0.80	6.67	0.80	6.67
Prefabricated architectural Multi-component	0.80	6.67	0.40	3.35
Prefabricated architectural one-component	0.80	6.67	0.40	3.35
Pretreatment coatings	0.80	6.67	0.80	6.67
Silicone release	0.80	6.67	0.80	6.67
Solar-absorbent	0.80	6.67	0.61	5.06
Vacuum-metalizing	0.80	6.67	0.80	6.67
Drum coating, new, exterior	0.54	4.52	0.54	4.52
Drum coating, new, interior	0.80	6.67	0.80	6.67
Drum coating,	0.80	6.67	0.80	6.67

reconditioned, exterior				
Drum coating, reconditioned, interior	1.17	9.78	1.17	9.78

TABLE 4-59G.
PLASTIC PARTS AND PRODUCTS VOC EMISSION RATE LIMITS
(VOC PER VOLUME SOLIDS)

Coating Category	kg VOC/liter solids	lbs VOC/gal solids
General one component	0.40	3.35
General multi-component	0.80	6.67
Electric dissipating coatings and shock-free	8.96	74.7
Extreme performance	0.80 (2-pack coatings/multi-component)	6.67 (2-pack coatings/multi-component)
Metallic	0.80	6.67
Military specification	0.54 (1 pack/1 component) 0.80 (2 pack/multi-component	4.52 (1 pack/1 component) 6.67 (2 pack/multi-component)
Mold seal	5.24	43.7
Multi-colored	3.04	25.3
Optical	8.96	74.7
Vacuum-metalizing	8.96	74.7

TABLE 4-59H.
AUTOMOTIVE/TRANSPORTATION AND BUSINESS MACHINE PLASTIC PARTS
VOC EMISSION RATE LIMITS
(VOC PER VOLUME SOLIDS)

Coating Category	kg VOC/liter solids	lbs VOC/gal solids
Automotive/Transportation Coatings (For red, yellow, and black automotive coatings, except touch up and repair coatings, the recommended limit is determined by multiplying the appropriate limit in this table by 1.15.)		
I. High Bake Coatings - Interior and Exterior Parts		
Flexible primer	1.39	11.58
Nonflexible primer	0.80	6.67
Base coats	1.24	10.34
Clear coat	1.05	8.76
Non-basecoat/clear coat	1.24	10.34
II. Low Bake/Air-dried Coatings . Exterior Parts		
Primers	1.66	13.80
Basecoat	1.87	15.59
Clear coat	1.39	11.58
Non-basecoat/clear coat	1.87	15.59
III. Low Bake/Air-dried Coatings - Interior Parts	1.87	15.59
IV. Touchup and Repair	2.13	17.72

Coatings		
Business Machine Coatings		
I. Primers	0.57	4.80
II. Topcoat	0.57	4.80
III. Texture Coat	0.57	4.80
IV. Fog Coat	0.38	3.14
V. Touchup and Repair	0.57	4.80

TABLE 4-59I.
PLEASURE CRAFT SURFACE COATING VOC EMISSION RATE LIMITS
(VOC PER VOLUME SOLIDS)

Coating Category	kg VOC/liter solids	lbs VOC/gal solids
Extreme high-gloss topcoat	1.88	15.6
High gloss topcoat	0.80	6.7
Pretreatment wash primer	6.67	55.6
Finish primer/surfacer	0.80	6.7
High build primer surfacer	0.55	4.6
Aluminum substrate antifoulant coating	1.53	12.8
Antifouling sealer/tie coat	0.8	6.7
Other substrate antifoulant coating	0.53	4.4
All other pleasure craft surface coatings for metal or plastic	0.80	6.7

C. Should product performance requirements or other needs dictate the use of higher-VOC materials than those that would meet the emission limits of subsections A and B of this section, an affected facility may opt to use add-on control equipment with an overall control efficiency of 90% in lieu of using low-VOC coatings and required application methods in subsection E of this section. Add-on devices include but are not limited to oxidizers, adsorbers, absorbers, and concentrators. Add-on devices coupled with capture systems to collect the VOC being released at the affected facilities shall achieve an overall control efficiency of no less than 90%.

D. In addition to the emissions limitations described in subsections A, B, and C of this section, the following work practices for storage, mixing operations, and handling operations for coatings, thinners, and coating-related waste materials shall be utilized:

1. All VOC-containing coatings, thinners, and coating-related waste materials shall be stored in closed containers.

2. Mixing and storage containers used for VOC-containing coatings, thinners, and coating-related waste materials shall be kept closed at all times except when depositing or removing these materials.

3. Spills of VOC-containing coatings, thinners, and coating-related waste materials shall be minimized.

4. VOC-containing coatings, thinners, and coating-related waste materials shall be conveyed from one location to another in closed containers or pipes.

E. In addition to the work practices described in subsection D, the following work practices for cleaning materials, used to clean surfaces before coating (surface preparation) and to clean application equipment between coating jobs, shall be utilized:

1. All VOC-containing cleaning materials and used shop towels shall be stored in closed containers.

2. Storage containers used for VOC-containing cleaning materials shall be kept closed at all times except when depositing or removing these materials

3. Spills of VOC-containing cleaning materials shall be minimized.

4. VOC-containing cleaning materials shall be conveyed from one location to another in closed containers or pipes

5. VOC emissions from cleaning of application, storage, mixing, and conveying equipment shall be minimized by ensuring that equipment cleaning is performed without atomizing the cleaning solvent, and all spent solvent is captured in closed containers.

F. One or more of the following application techniques shall be used to apply any finish material listed in Tables 4-59A through 4-59I:

1. Flow/curtain coating;

2. Dip coating;

3. Roller coating;

4. Brush coating;

5. Electrodeposition coating;

6. High volume low pressure (HVLP) spraying;

7. Electrostatic spray;

8. Airless spray;

9. Air-assisted airless spray, or

10. Other coating application methods that achieve emission reductions equivalent to or greater than those achieved by HVLP or electrostatic spray application methods.

9VAC5-40-8840. Standard for visible emissions.

The provisions of Article 1 (9VAC5-40-60 et seq.) of this chapter (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9VAC5-40-8850. Standard for fugitive dust/emissions.

The provisions of Article 1 (9VAC5-40-60 et seq.) of this chapter (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9VAC5-40-8860. Standard for odor.

The provisions of Article 2 (9 VAC 5-40-130 et seq.) of this chapter (Emission Standards for Odor, Rule 4-2) apply.

9VAC5-40-8870. Standard for toxic pollutants.

The provisions of Article 4 (9VAC5-60-200 et seq.) of 9VAC5-60 (Hazardous Air Pollutant Sources) apply.

9VAC5-40-8880. Compliance.

A. The provisions of 9VAC5-40-20 (Compliance) apply.

B. Compliance may be demonstrated (i) on a mass VOC per gallon of coating less water and exempt solvents basis under 9VAC5-40-8830 A, (ii) on a mass VOC per volume of solids basis under 9VAC5-40-8830 B, or (iii) the overall control basis under 9VAC5-40-8830 C.

C. The emission standards in 9VAC5-40-8830A and 9VAC5-40-8830B apply coating by coating or to the volume weighted average of coatings where the coatings are used on a single coating application system and the coatings are the same type or perform the same function. Such averaging shall not exceed 24 hours.

D. Compliance determinations for control technologies not based on compliant coatings (i.e., coating formulation alone) shall be based on the applicable emission standards in 9VAC5-40-8830B and the procedures of 9VAC5-20-121.

9VAC5-40-8890. Compliance schedule.

The owner shall comply with the provisions of this article as expeditiously as possible but in no case later than February 1, 2017.

9VAC5-40-8900. Test methods and procedures.

The provisions of 9VAC5-40-30 (Emission Testing) apply.

9VAC5-40-8910. Monitoring.

The provisions of 9VAC5-40-40 (Monitoring) apply.

9VAC5-40-8920. Notification, records and reporting.

The provisions of 9VAC5-40-50 (Notification, Records and Reporting) apply.

9VAC5-40-8930. Registration.

The provisions of 9VAC5-20-160 (Registration) apply.

9VAC5-40-8940. Facility and control equipment maintenance or malfunction.

The provisions of 9VAC5-20-180 (Facility and Control Equipment Maintenance or Malfunction) apply.

9VAC5-40-8950. Permits.

A permit may be required prior to beginning any of the activities specified in this section and the provisions of 9VAC5-50 (New and Modified Stationary Sources) and 9VAC5-80 (Permits for Stationary Sources) may apply. Owners contemplating such action should contact the appropriate regional office for guidance.

1. Construction of a facility.

2. Reconstruction (replacement of more than half) of a facility.

3. Modification (any physical change to equipment) of a facility.

4. Relocation of a facility.

5. Reactivation (re-startup) of a facility.

HISTORICAL NOTES:

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