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TITLE 250 – DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CHAPTER 120 – AIR RESOURCES

SUBCHAPTER 05 – AIR POLLUTION CONTROL

PART 19 – Control of Volatile Organic Compounds from Coating Operations

19.1 Purpose and Authority

19.1.1 Purpose

The purpose of this regulation is to limit the emissions of volatile organic compounds from coating operations.

19.1.2 Authority

These regulations are authorized pursuant to R.I. Gen. Laws § 42-17.1-2(19) and R.I. Gen. Laws Chapter 23-23, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws Chapter 42-35.

19.2 Application

The terms and provisions of this regulation shall be liberally construed to permit the Department to effectuate the purposes of state laws, goals and policies.

19.3 Severability

If any provision of this regulation or the application thereof to any person or circumstance, is held invalid by a court of competent jurisdiction, the validity of the remainder of the regulation shall not be affected thereby.

19.4 Incorporated Materials

These regulations hereby adopt and incorporate 40 C.F.R. § 60 Appendix A-7 Methods 24, 24A, 25, 25A, and 25B (2019) by reference, not including any further editions or amendments thereof and only to the extent that the provisions therein are not inconsistent with these regulations.

19.5 Definitions

A. Unless otherwise expressly defined in this section, the terms used in this regulation shall be defined by reference to Part 0 of this Subchapter (General Definitions). As used in this regulation, the following terms shall, where the context permits, be construed as follows:

1. "Actual emissions" means the quantity of volatile organic compounds emitted from a source during a particular time period.

2. "Adhesion primer" means a coating that is applied to a polyolefin part to promote the adhesion of a subsequent coating. An adhesion prime is clearly identified as an adhesion prime or adhesion promoter on its accompanying material safety data sheet.

3. "Air-dried coating" means a coating that is dried by the use of air or forced warm air at temperatures up to ninety degrees Celsius (90ºC) or one hundred and ninety-four degrees Fahrenheit (194ºF).

4. “Airless spray application” means a coating spray application system using high fluid pressure, without compressed air, to atomize the coating.

5. “Air-assisted airless spray application” means a coating spray application system using fluid pressure to atomize the coating and low-pressure air to adjust the shape of the spray pattern.

6. “Antifouling coating” means a coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms and registered with the United States Environmental Protection Agency (EPA) as a pesticide under 7 U.S.C. § 136 (Federal Insecticide, Fungicide, and Rodenticide Act).

7. “Antifouling sealer" or "tie coat” means a coating applied over biocidal antifouling coating for the purpose of preventing release of biocides into the environment or to promote adhesion between an antifouling coating and a primer or another antifouling coating.

8. “As-applied” means the composition of coating at the time it is applied to a substrate, including any solvent, catalyst or other substance added to the coating as supplied by the manufacturer calculated using the procedure in §§ 19.13(A) or (B) of this Part.

9. “Baked” means cured at a temperature at or above ninety degrees Celsius (90ºC) or one hundred ninety-four degrees Fahrenheit (194ºF).

10. “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 standard industrial classification numbers 3572, 3573, 3574, 3579, and 3661 and photocopy machines, a subcategory of standard industrial classification number 3861.

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

12. “Capture efficiency” means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from the coating and related cleaning, expressed as a percentage.

13. "Class II hardboard paneling finish" means finishes that meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.

14. "Clear coating" means a coating which lacks color and opacity or is transparent and which uses the undercoat as a reflective base or undertone color.

15. “Clear wood finishes” means a clear and semi-transparent topcoat applied to a wood substrate to provide a transparent or translucent film.

16. "Coating” means a material that is deposited in a thin, persistent, uniform layer across the surface of a substrate for aesthetic, protective or functional purposes, including but not limited to, paints, primers, inks and maskants.

    a. “Coating” does not include protective oils, acids and bases.

17. "Coating applicator" means a device, mechanism, or apparatus used to apply a coating. Common types of application techniques include knife, roll, spray or dip.

18. "Coating of plastic parts of automobiles and trucks" means the coating of any plastic part that is or shall be assembled with other parts to form an automobile or truck.

19. "Coating of plastic parts of business machines" means the coating of any plastic part that is or shall be assembled with other parts to form a business machine.

20. "Coating unit" means a series of one or more coating applicators and any associated drying area and/or oven wherein a coating is applied, dried, and/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.

21. "Coil coating" means the application of a coating to any continuous metal strip with thickness of 0.006 inch or more that is packaged in a roll or coil.

22. “Dip coating” means a method of applying a coating to a surface by submersion into and removal from a coating bath.

23. "Drum" means any cylindrical metal shipping container of 13- to 110-gallon capacity.

24. “Electric dissipating coating” means a coating that rapidly dissipates a high-voltage electric charge.

25. “Electric-insulating and thermal-conducting coating” means a coating that displays an electrical insulation of at least one thousand (1000) volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit.

26. "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.

27. “Electrostatic application” means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets.

28. "Electrostatic prep coat" means a coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic prep coat is clearly identified as an electrostatic prep coat on its accompanying material safety data sheet.

29. “EMI/RFI shield coating” means a coating that functions to attenuate electromagnetic interference, radio frequency interference signals or static discharge.

30. "Emission baseline" means a level of emissions calculated by multiplying two factors:

a. The lowest of the source's actual or allowable emission rate in emissions per unit of production; and,

b. The source's actual capacity utilization, or units of production, over some representative time period. Generally, the time period is the preceding two-year average unless the source can demonstrate that those years were not representative of historical production.

31. “Etching filler” means a coating that contains less than twenty-three percent (23%) solids by weight and at least 0.5% acid by weight and is used as a substitute for the application of a pretreatment coating followed by a primer.

32. “Extreme high gloss coating” means any coating which achieves greater than ninety percent (90%) reflectance on a sixty degree (60°) meter when tested by ASTM Method D 523-89.

33. "Extreme performance coatings" means coatings intended for exposure to any of the following; outdoor weather conditions all of the time, temperatures frequently above ninety-five degrees Celsius (95ºC) or two-hundred and three degrees Fahrenheit (203ºF), detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.

34. “Fabric coating” means the coating of a textile substrate with a knife, roll or rotogravure coater to impart properties that are not initially present, such as strength, stability, water or acid repellency, or appearance.

35. “Finish primer or surfacer” means a coating applied with a wet film thickness of less than ten (10) millimeters 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.

36. "Flatwood paneling coating" means the application of a coating to flat wood panels including: printed interior panels made of hardboard plywood and thin particle board (i.e., less than or equal to 0.25 inches in thickness) natural finish hardboard plywood panels; and hardboard paneling with Class II finishes.

a. Flatwood paneling does not include: Class I hardboard panels, particle board used in furniture or wood products, insulation board, exterior siding, tile board, and soft wood plywood coating lines.

37. "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.

38. “Flexible primer” means a primer with elastomeric qualities that provides a compatible, flexible substrate over bonded sheet rubber and rubber-type coatings.

39. “Flow coating” means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle.

40. “Fog coat" means a coating that is applied to a plastic part at a thickness of no more than 0.5 mils of coating solids for the purpose of color matching without masking a molded-in texture.

41. "Gloss reducer" means a coating that is applied to a plastic part solely to reduce the shine of the part. A gloss reducer shall not be applied at a thickness of more than 0.5 mils of coating solids.

42. "Hardboard" means a panel manufactured primarily from inter-felted ligno-cellulosic fibers that are consolidated under heat and pressure in a hot press.

43. "Hardwood plywood" means plywood whose surface layer is a veneer of hardwood.

44. “Heat-resistant coating” means a coating that is required to withstand a temperature of at least 204.5°C (400°F) during normal use.

45. "High build primer or surfacer” means a coating applied with a wet film thickness of ten (10) millimeters or more 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.

46. "High-gloss coating" means a coating that achieves at least eight-five percent (85%) reflectance on a sixty (60) degree meter when tested by ASTM Method D-523.

47. "High-temperature coating" means a coating that during normal use must withstand a temperature of at least four hundred twenty-six degrees Celsius (426°C) of eight-hundred degrees Fahrenheit (800°F).

48. “HVLP spray application” means to apply a coating using a high-volume, low-pressure spray application system that is designed to operate at air pressures between 0.1 and 10 pounds per square inch gauge, measured dynamically at the center of the air cap and the air horns.

49. “Knife coating” means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

50. "Large appliance coating" means the application of a coating to the surface of component metal parts (including, but not limited to, doors, cases, lids, panels and interior parts) of any residential or commercial washer, dryer, freezer, range, refrigerator, water heater, dishwasher, trash compactor, air conditioner, or other similar products under Standard Industrial Classification Code 363.

    a. Large appliance coating does not include the use of quick drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.25 gallons in any one 8-hour period.

51. "Magnet wire coating" means the application of a coating in which an electrically insulating varnish or enamel is applied onto the surface of a wire for use in electrical machinery.

52. "Metal furniture coating" means the application of a coating to any furniture piece made of metal or any metal part that will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece including, but not limited to, tables, chairs, waste baskets, beds, desk, locker, benches, shelving, file cabinets, and room dividers.

53. “Metallic coating” means a coating that contains more than five (5) grams of metal particle per liter of coating, as-applied;

54. "Military specification coating" means a coating which has a formulation approved by a United States Military Agency for use on military equipment.

55. "Miscellaneous metal and plastic parts coating" means a coating applied to the surface of a varied range of metal and plastic parts and products 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:

a. Automotive or transportation equipment;

b. Bicycles and sporting goods;

c. Construction equipment;

d. Electronic equipment;

e. Extruded aluminum structural components;

f. Fabricated metal products (metal covered doors, frames, etc.);

g. Interior or exterior automotive parts;

h. Laboratory and medical equipment;

i. Lawn and garden equipment;

j. Motor vehicle accessories;

k. Recreational vehicles;

l. Pleasure craft or recreational boats;

m. Small and large farm machinery (harvesting, fertilizing and planting machines, tractors, combines, lawn and garden tractors, lawn mowers, rototillers, etc.);

n. Small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);

o. Commercial machinery (business machines. office equipment, computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);

p. Toys;

q. Steel drums; and

r. Metal pipes.

s. Miscellaneous metal or plastic parts or product coating does not include:

(1) Aerospace coating;

(2) Automotive refinishing subject to Part 30 of this Subchapter (Control of Volatile Organic Compounds from Automobile Refinishing Operations);

(3) Architectural and industrial maintenance coating subject to Part 33 of this Subchapter (Control of VOC from Architectural Coatings and Industrial Maintenance Coatings);

(4) Wood furniture coating subject to Part 35 of this Subchapter (Control of Volatile Organic Compounds and Volatile Hazardous Air Pollutants from Wood Products Manufacturing Operations);

(5) Industrial adhesives and sealants subject to Part 44 of this Subchapter (Control of VOC from Adhesives and Sealants);

(6) Can, coil, large appliance, magnet wire, and metal furniture coating and cleaning operations subject to specific separate requirements in this Part;

(7) Fiberglass boat manufacturing materials subject to Part 51 of this Subchapter (Control of Volatile Organic Compound Emissions from Fiberglass Boat Manufacturing);

(AA) Specifically, the miscellaneous metal products and plastic parts categories do not include gel coats applied to fiber-reinforced plastic (fiberglass composite) products removed from the mold or used as in-mold coatings in the production of fiberglass parts and body fillers and putties used to repair surface defects in fiberglass composite parts, or putties used to bond fiberglass composite parts together. These putties are part of the composite structure and are not coatings.

(8) Automobiles and light-duty truck assembly coatings;

(9) Shipbuilding and ship repair facilities;

(10) Coating applied to test materials, test panels and coupons in research and development, quality control or performance testing.

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

57. "Multicomponent coating" means a coating which is packaged in two or more parts, which parts are combined before application, and where a coreactant from one part of the coating chemically reacts, at ambient conditions, with a coreactant from another part of the coating.

58. "Natural finish hardwood plywood panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

59. “One-component coating” means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity.

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

61. “Oven” means a chamber within which heat is used to bake, cure or polymerize and/or dry a surface coating.

62. “Overvarnish” means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss or to protect the finish against abrasion and corrosion.

63. "Pail" means any cylindrical metal shipping container with a capacity of greater than or equal to one (1) and less than thirteen (13) gallons and constructed of 29-gauge (0.0141 inches) and heavier material.

64. "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.

65. “Paper, film and foil coating” means the application of a continuous layer of coating across the width or any portion of the width of a paper, film or foil substrate to:

    a. Create a functional or protective layer;

    b. Saturate a substrate for lamination; or

    c. Provide adhesion between two substrates for lamination.

    d. Paper film and foil coating does not include:

(1) Coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press is part of a printing process.

66. “Pleasure craft” means any marine or freshwater vessel manufactured or operated primarily for recreational purposes.

67. "Pleasure craft coating” means any marine coating, except unsaturated polyester resin (fiberglass), applied to a pleasure craft or to parts and components of a pleasure craft.

68. “Pressure sensitive adhesive” means adhesive that forms a bond when pressure is applied, without activation via solvent, water or heat.

69. “Pressure sensitive tape and label coating” means the application of a pressure sensitive adhesive to a paper, film or foil substrate.

70. “Pretreatment coating” means a coating, containing no more than twelve percent (12%) solids by weight and at least one-half percent (0.5%) acid by weight, applied directly to metal surfaces to provide surface etching, adhesion and ease when stripping.

71. “Pretreatment wash primer” means a coating, containing at least 0.1 percent acid by weight and no more than twenty-five percent (25%) solids by weight, that is used to provide surface etching and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

72. "Prime coat" means the first of two or more coatings applied to a surface.

73. "Printed interior panels" means panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

74. "Refinishing" means the repainting of used equipment.

75. “Related cleaning” means the removal of uncured coatings, coating residue, and contaminants from:

a. Miscellaneous metal and plastic parts prior to the application of coatings,

b. Miscellaneous metal and plastic parts between coating applications, or

c. Transfer lines, storage tanks, spray booths, and coating application equipment.

76. “Repair coating” means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations.

77. "Resist coat" means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.

78. “Roll coating” means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers.

79. “Safety-indicating coating” means a coating that changes in a physical characteristic, such as color, to indicate unsafe conditions.

80. "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.

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

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

83. “Solid-film lubricant” means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene or other solids that act as a dry lubricant between faying surfaces.

84. “Stencil coating” means a coating that is applied over a stencil to a plastic part at a thickness of one (1) mil or less of coating solids. Stencil coats are most frequently letters, numbers, or decorative designs.

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

86. "Thin particleboard" means a manufactured board that is 0.25 inch or less in thickness made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.

87. "Tile board" means paneling that has a colored, waterproof coating.

88. "Topcoat" means the final film or series of films of coating applied to a surface;

89. "Transfer efficiency" means the portion of coating solids that adheres to the pleasure craft surface during the application process, expressed as a percentage of the total volume of coating solids delivered by the applicator.

90. "Translucent coating" means a coating which contains binders and pigment and is formulated to form a colored, but not opaque, film;

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

92. "Vacuum-metalizing coating" means the undercoat applied to a substrate on which the metal is deposited prior to a vacuum-metalizing process or the overcoat applied directly to the metal film after a vacuum-metalizing process;

93. "Vacuum metalizing process" means the process of evaporating metals inside a vacuum chamber and depositing them on a substrate to achieve a uniform metalized layer;

94. "Vinyl coating" means the application of a coating or coatings on a vinyl coated paper, vinyl coated fabric, or vinyl substrate or printing on vinyl-coated fabric or vinyl sheets.

95. "Volatile Organic Compound" or "VOC" means Volatile Organic Compound and Halogenated Organic Compound or VOC and HOC.

19.6 Applicability

19.6.1 Coil Coating

This regulation applies to the owner or operator of a coil coating operation whose actual VOC emissions, from all coil coating, including related cleaning activities are greater than or equal to 2.7 tons per rolling 12-month period, prior to controls.

19.6.2 Fabric and/or Vinyl Coating

This regulation applies to the owner or operator of a fabric and/or vinyl coating operation whose actual VOC emissions, from fabric and/or vinyl coating,

including related cleaning activities, are greater than or equal to 2.7 tons per rolling 12-month period, prior to controls.

19.6.3 Flatwood Paneling Coating

This regulation applies to the owner or operator of a flatwood paneling coating operation whose actual VOC emissions from flatwood paneling coating, including related cleaning activities, are greater than or equal to 2.7 tons per 12-month rolling period, prior to controls.

19.6.4 Large Appliance Coating

A. This regulation applies to the owner or operator of a large appliance coating operation whose actual VOC emissions from large appliance coating, including related cleaning activities are greater than or equal to 2.7 tons per rolling 12-month period, prior to controls.

B. Exemptions

1. The emissions limitations in § 19.7.4 of this Part do not apply to

    a. Stencil coatings;

    b. Safety indicating coatings;

    c. Solid-film lubricants;

    d. Electric-insulating;

    e. Thermal-conducting coatings;

    f. Touch-up coatings; or

    g. Coating applications utilizing hand-held aerosol cans.

19.6.5 Magnet Wire Coating

This regulation applies to the owner or operator of a magnet wire coating unit, whose actual VOC emissions from magnet wire coating, including related cleaning activities, are greater than or equal to 2.7 tons per rolling 12-month period, prior to controls.

19.6.6 Metal Furniture Coating

A. This regulation applies to the owner or operator of a metal furniture coating operation, whose actual VOC emissions from metal furniture coating, including

related cleaning activities, are greater than or equal to 2.7 tons per rolling 12-month period, prior to controls.

B. Exemptions

1. The emissions limitations in § 19.7.6 of this Part do not apply to:

a. Stencil coatings;

b. Safety indicating coatings;

c. Solid-film lubricants;

d. Electric-insulating and thermal-conducting coatings;

e. Touch-up coatings; or

f. Coating application utilizing hand-held aerosol cans.

19.6.7 Miscellaneous Metal and/or Plastic Parts Surface Coating

A. This regulation applies the owner or operator of a miscellaneous metal and/or plastic parts coating operation whose actual emissions from miscellaneous metal and/or plastic parts coating, including related cleaning activities, are greater than or equal to 2.7 tons per rolling 12-month period, prior to controls.

B. Exemptions

1. For miscellaneous metal and plastic parts coating, the emissions limitations in § 19.7.7(A) of this Part and application methods in § 19.7.7(B) of this Part shall not apply to:

a. Aerosol coating products; and

b. Powder coatings.

2. For miscellaneous metal parts coating the emissions limitations § 19.7.7(A) of this Part and application methods in § 19.7.7(B) of this Part shall not apply to:

a. Stencil coating;

b. Safety-indicating coating;

c. Solid-film lubricant;

d. Electric-insulating and thermal-conducting coating;

e. Magnetic data storage disk coating;

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

3. For miscellaneous metal parts coating the application methods in § 19.7.7(B) of this Part shall not apply to:

a. Touch-up coatings;

b. Repair coatings; or

c. Textured finish coating,

4. For miscellaneous plastic parts coating the emissions limitations in § 19.7.7(A) of this Part shall not apply to:

a. Touch-up and repair coatings;

b. Stencil coatings applied on clear or translucent 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 fifty (50) gallons in any one 12-month rolling period, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed two-hundred (200) gallons per 12-month rolling period, per facility;

f. Reflective coating applied to highway cones;

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

h. EMI/RFI shielding coatings; and

i. Heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed one-hundred (100) gallons per 12-month rolling period, per facility.

5. For miscellaneous plastic parts coating, the application methods in § 19.7.7(B) of this Part do not apply to airbrush operations using five (5) gallons or less per year of coating.

6. For automotive/transportation and business machine plastic parts coating the emissions limitations specified in § 19.7.7(A) of this Part shall not apply to:

    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.

7. For pleasure craft coating the application methods in § 19.7.7(B) of this Part do not apply to the application of high gloss coatings as defined in § 19.5(A)(46) of this Part.

19.6.8 Paper, Film, and Foil Coating

A. The emissions limitations in § 19.7.8(A) of this Part apply to the owner and operator of a paper coating operation, whose actual VOC emissions, including related cleaning activities, are greater than or equal to 2.7 tons per rolling 12-month period, prior to controls.

B. The emission limitations in § 19.7.8(B) of this Part shall apply to the owner and operator of a paper, film, or foil coating process if an individual paper, film or foil coating unit has the potential to emit more than twenty-five (25) tons per year of VOC from coatings, prior to controls.

C Exemptions

1. For paper, film and foil coating operations subject to § 19.6.8(B) of this Part, the requirements of § 19.7.8(B) of this Part do not apply provided the facility obtains and complies with a federally enforceable emission limitation which restricts the potential emissions of the coating line to below twenty-five (25) tons per year.

19.6.9 General Applicability Requirements

A. The work practice requirements for coating and cleaning operations in § 19.8 of this Part, the recordkeeping and reporting requirements in § 19.10 of this Part, the registration requirements in § 19.11 of this Part and applicable compliance demonstration requirements is § 19.12 of this Part apply to the owner or operator of any coating facility that meets the applicability criteria in §§ 19.6.1 through 19.6.8 of this Part, as applicable.

B. The owner or operator of a coating facility whose emissions are below the applicability thresholds in §§ 19.6.1 and 19.6.8 of this Part shall maintain records of either material purchase or actual usage records to verify that this regulation does not apply to such owner or operator.

C. Any coating facility which has actual VOC emissions greater than or equal to 2.7 tons per rolling 12-month period in any one of the coating categories in §§ 19.6.1 through 19.6.8 of this Part coating may apply to the Director for exemption from § 19.7 of this Part. Exemption will be given in the form of an enforceable document, and will include the following conditions:

1. The total emissions from all coating operations shall not exceed 1,666 pounds in any one calendar month,

2. The facility shall maintain the following records at the facility for a period of five (5) years. This information shall be made available to the Department and EPA upon request:

   a. The name, identification number and amount used each month of each coating, as applied, on each coating line or operation;

   b. The mass of VOC per volume (excluding water), as applied, for each coating used on each coating line or operation;

   c. The type and amount of solvent used for diluents and cleanup operations;

3. If the limit in § 19.6.9(C)(1) of this Part is exceeded, the applicable emission limitations specified in § 19.7 of this Part will immediately apply.

D. The emissions limits in § 19.7 of this Part shall not apply to the use of any adhesive, sealant, adhesive primer or sealant primer in an operation that is subject to the emission limits in Part 44 of this Subchapter (Control of VOC from Adhesives and Sealants).

E. A minor source permit or major source permit, shall be issued pursuant to Part 9 of this Subchapter (Air Pollution Control Permits), if add-on air pollution control equipment is used. If the air pollution control equipment is exempt from the

requirements to obtain a permit in Part 9 of this Subchapter (Air Pollution Control Permits), a registration form may be required to be on file with the Office of Air Resources.

19.7 Emissions Limitations

19.7.1 Coil coating

A. The owner and operator of any coil coating operation that meets the applicability threshold in § 19.6.1 of this Part, shall use one of the following methods to control emissions of VOCs:

1. Use only low-VOC coatings that have an as applied VOC content no greater than the applicable level in § 19.7.1(A)(1)(a) of this Part;

   a. Coil VOC content limitations in pounds of VOC per gallon of coating less water and exempt compounds, as applied

Category	lbs. of VOC /gal of coating minus water and exempt compounds, as applied
Coil	2.6

2. Use a combination of low-VOC coating and add on control equipment that does not exceed the as applied VOC content limitation in § 19.7.1(A)(2)(a) of this Part;

   a. Coil VOC content limitations in pounds of VOC per gallon of solids, as applied.

Category	lbs. of VOC/gal of solids, as applied
Coil	4.02

3. Use of daily-weighted averaging, as determined by the procedures in § 19.13(D) of this Part to achieve the VOC content limitation in §§ 19.7.1(A)(1)(a) or 19.7.1(A)(2)(a) of this Part for the coating unit;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

19.7.2 Fabric and Vinyl Coating

A. The owner and operator of any fabric and vinyl coating unit that meets the applicability threshold in § 19.6.2 of this Part, shall use one of the following methods to achieve compliance with this Part.

1. Use only low-VOC coatings that have an as applied VOC content no greater than the applicable level in § 19.7.2(A)(1)(a) of this Part;

a. Fabric and vinyl VOC content limitations in pounds of VOC per gallon of coating less water and exempt compounds, as applied

Category	lbs. of VOC /gal of coating minus water and exempt compounds, as applied
Fabric	2.9
Vinyl	3.8

2. Use a combination of low-VOC coating and add on control equipment that does not exceed the as applied VOC content limitation, expressed in pounds of VOC per gallon of solids as applied, in § 19.7.2(A)(2)(a) of this Part.

a. Fabric and vinyl VOC content limitations in pounds of VOC per gallon of solids, as applied.

Category	lbs. of VOC/gal of solids, as applied
Fabric	4.79
Vinyl	7.86

3. Use of daily-weighted averaging, as determined by the procedures in § 19.13(D) of this Part, to achieve the VOC content limitations in §§ 19.7.2(A)(1)(a) or 19.7.2(A)(2)(a) of this Part for the coating unit;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

19.7.3 Flatwood Paneling

A. The owner and operator of any flatwood paneling operation that meets the applicability threshold in § 19.6.3 of this Part, shall use one of the following methods to control emissions of VOCs:

1. Use only low-VOC coatings that have an as applied VOC that does not exceed the applicable VOC content limitations in §§ 19.7.3(A)(1)(b) or (d) of this Part:

a. Prior to July 1, 2020 the VOC content of the as applied coating shall not exceed the applicable VOC content limitations in § 19.7.3(A)(1)(b) of this Part;

b Flatwood paneling VOC content limitation prior to July 1, 2020

Category	lbs. VOC/1000 square feet coated
Printed Interior Wall Panels Made of Hardwood Plywood and Thin Particleboard	6.0
Natural Finish Hardwood Plywood Panels	12.0
Class II Finishes for Hardboard Paneling	10.0

c. Effective July 1, 2020, the VOC content of the as applied coating, minus water and exempt compounds, shall not exceed the VOC emissions limitations in § 19.7.3(A)(1)(d) of this Part;

d. Flatwood paneling VOC content limitations in lbs. of VOC per gallon of coating, excluding water and exempt compounds, as applied effective July 1, 2020.

Category	lbs. VOC per gallon of coating minus water and exempt compounds, as applied
Printed interior panels made of hardwood, plywood, or thin particleboard	2.1
Natural finish hardwood plywood panels	2.1
Class II hardboard paneling finish	2.1
Tileboard	2.1
Exterior siding	2.1

2. Use a combination of low-VOC coating and add on control equipment that does not exceed the VOC content limitations, expressed in pounds of VOC per gallon of solids as applied, in § 19.7.3(A)(2)(b) of this Part.

    a. Effective July 1, 2020, the VOC content of the as applied coating shall not exceed the VOC content limitations in pounds of VOC per gallon of solids, as applied in § 19.7.3(A)(2)(b) of this Part.

    b. Flatwood paneling VOC content limitations in lbs. of VOC per gallon of solids, as applied effective July 1, 2020.

Category	lbs. VOC per gallon solids, as applied
Printed interior panels made of hardwood, plywood, or thin particleboard	2.9
Natural finish hardwood plywood panels	2.9
Class II hardboard paneling finish	2.9
Tileboard	2.9

Exterior siding	2.9

3. Use of daily-weighted averaging, as determined by the procedures in equation for in § 19.13(D) of this Part, to achieve the VOC content limitations in §§ 19.7.3(A)(1) or (2) of this Part;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

19.7.4 Large Appliance Coating

A. The owner and operator of any large appliance coating operation that meets the applicability threshold in § 19.6.4 of this Part, shall use one of the following methods to control emissions of VOCs:

1. Use only low-VOC coatings that have an as applied VOC content, minus water and exempt compounds that does not exceed the VOC content limitations in §§ 19.7.4(A)(1)(b) or (d) of this Part;

a. Prior to July 1, 2020, the VOC content of the as applied coating, minus water and exempt compounds, shall not exceed the VOC content limitations in § 19.7.4(A)(1)(b) of this Part.

b. VOC content limitations in pounds of VOC per gallon of coating less water and exempt compounds, as applied prior to July 1, 2020.

Category	lbs. VOC per gallon of coating minus water and exempt compounds, as applied
Large appliance	2.8

c. Effective July 1, 2020 the VOC content of the as applied coating minus water and exempt compounds shall not exceed the VOC content limitations in § 19.7.4(A)(1)(d) of this Part.

d. Large appliance VOC content limitations in pounds of VOC per gallon of coating less water and exempt compounds, as applied effective July 1, 2020.

Category	Baked	Air Dried
	lbs. VOC/gallon of coating, less water and exempt compounds, as applied	lbs. VOC/gallon of coating, less water and exempt compounds, as applied
General, one component	2.3	2.3
General, multi-component	2.3	2.8
Extreme high gloss	3.0	2.8
Extreme performance	3.0	3.5
Heat resistance	3.0	3.5
Solar absorbent	3.0	3.5
Metallic	3.5	3.5
Pretreatment coatings	3.5	3.5

2. Use a combination of low-VOC coating and add on control equipment meeting the as applied VOC content, expressed in pounds of VOC per gallon of solids, as applied, in § 19.7.4(A)(2)(b) or (d) of this Part as applicable.

    a. Prior to July 1, 2020, the VOC content, shall not exceed the VOC content limits ins § 19.7.4(A)(2)(b) of this Part.

    b. Large appliance VOC content limitations in pounds of VOC per gallon of solids, as applied, effective prior to July 1, 2020.

Category	lbs. VOC per gallon of solids
Large appliance	4.52

c. Effective July 1, 2020 the VOC content of the as applied coating shall not exceed the VOC content limitations in pounds of VOC per gallon of solids, as applied, in § 19.7.4(A)(2)(d) of this Part.

d. Large appliance VOC content limitations in lbs. of VOC per gallon of solids, as applied, effective July 1, 2020.

Category	Baked	Air Dried
	Lb VOC/gal of solids, as applied	Lb VOC/gal of solids, as applied
General, one component	3.3	3.3
General, multi-component	3.3	4.5
Extreme high gloss	5.1	4.5
Extreme performance	5.1	6.7
Heat resistance	5.1	6.7
Solar absorbent	5.1	6.7
Metallic	6.7	6.7
Pretreatment coatings	6.7	6.7

3. Use of daily-weighted averaging, as determined by the procedures in equation for in § 19.13(D) of this Part, to achieve the VOC content limitations in §§ 19.7.4(A)(1) or (2) of this Part;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

B. The owner and operator of any large appliance coating operation that meets the applicability threshold in § 19.6.4 of this Part, shall use one or more of the following application methods:

1. Electrostatic spray application;

2. HVLP spray;

3. Flow coat;

4. Roller coat;

5. Dip coat, including electrodeposition;

6. Airless spray;

7. Air-assisted airless spray; or

8. A coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by the Director and EPA.

19.7.5 Magnet Wire coating

A. The owner and operator of any magnet wire coating operation that meets the applicability threshold in § 19.6.5 of this Part, shall use one of the following methods to control emissions of VOCs:

1. Use only low-VOC coatings that have an as applied VOC content that does not exceed the VOC content limitation in § 19.7.5(A)(1)(a) of this Part.

a. Magnet wire VOC content limitation in pounds of VOC per gallon of coating minus water and exempt compounds, as applied.

Category	lbs. VOC per gallon of coating minus water and exempt compounds, as applied
Magnet Wire	1.7

2. Use a combination of low-VOC coating and add on control equipment that does not exceed the VOC content limitation in § 19.7.5(A)(2)(a) of this Part;

    a. Magnet wire VOC content limitation in pounds of VOC per gallon of solids.

Category	lbs. VOC per gallon of solids
Magnet Wire	2.21

3. Use daily-weighted averaging, as determined by the procedures in § 19.13(D) of this Part, to achieve the VOC content limitation in §§ 19.7.5(A)(1)(a) or 19.7.5(A)(2)(a) of this Part;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

19.7.6 Metal Furniture Coating

A. The owner and operator of any metal furniture coating operation that meets the applicability threshold in § 19.6.6 of this Part, shall use one of the following methods to control emissions of VOCs:

1. Use only low-VOC coatings that have an as applied VOC content, minus water and exempt compounds, that does not exceed the VOC content limitations in §§ 19.7.6(A)(1)(b) or (d) of this Part;

a. Prior to July 1, 2020, the VOC content of the as applied coating (minus water and exempt compounds), shall not exceed the VOC content limitation in § 19.7.6(A)(1)(b) of this Part.

b. Metal Furniture VOC content limitation in pounds of VOC per gallon of coating minus water and exempt compounds, as applied effective prior to July 1, 2020.

Category	lbs. VOC per gallon of coating minus water and exempt compounds, as applied
Metal furniture	3.08

c. Effective July 1, 2020 the VOC content of the as applied coating shall not exceed the VOC content limitations in § 19.7.6(A)(1)(d) of this Part.

d. Metal Furniture VOC content limitations in lbs. of VOC per gallon of coating excluding water and exempt compounds, as applied effective July 1, 2020.

Coating Type	Baked	Air dried
	lbs. VOC/gallon of coating, less water and exempt compounds, as applied	lbs. VOC/gallon of coating, less water and exempt compounds, as applied
General, One Component	2.3	2.3
General, Multi-Component	2.3	2.8
Extreme High Gloss	3	2.8
Extreme Performance	3	3.5
Heat Resistant	3	3.5
Metallic	3.5	3.5

Pretreatment Coatings	3.5	3.5
Solar Absorbent	3	3.5

2. Use a combination of low-VOC coating and add on control equipment that does not exceed the VOC content limitations, expressed in pounds of VOC per gallon of solids as applied, in §§ 19.7.6(A)(1)(b) or (d) of this Part as applicable.

    a. Prior to July 1, 2020, the VOC content of the as applied coating, minus water and exempt compounds, shall not exceed the VOC content limitation in § 19.7.6(A)(2)(b) of this Part.

    b. Metal furniture VOC content limitation in pounds of VOC per gallon of solids, as applied, effective prior to July 1, 2020.

Category	lbs. VOC per gallon of solids, as applied
Metal furniture	5.06

    c. Effective July 1, 2020, the VOC content of the as applied coating shall not exceed the VOC content limitations in pounds of VOC per gallon of solids, as applied in § 19.7.6(A)(2)(d) of this Part.

    d. Metal furniture VOC content limitations in pounds of VOC per gallon of solids, as applied effective July 1, 2020.

Coating Type	Baked	Air dried
	lbs. VOC per gal of solids, as applied	lbs. VOC per gal of solids, as applied
General, One Component	3.3	3.3
General, Multi-Component	3.3	4.5
Extreme High Gloss	5.1	4.5
Extreme Performance	5.1	6.7

Coating Type	Baked	Air dried
	lbs. VOC per gal of solids, as applied	lbs. VOC per gal of solids, as applied
Heat Resistant	5.1	6.7
Metallic	6.7	6.7
Pretreatment Coatings	6.7	6.7
Solar Absorbent	5.1	6.7

3. Use of daily-weighted averaging for each coating unit, as determined by the procedures in § 19.13(D) of this Part, to achieve the VOC content limitations in §§ 19.7.6(A) (1) or (2) of this Part as applicable;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

B. The owner and operator of any metal furniture coating operation that meets the applicability threshold in § 19.6 6 of this Part, shall use one or more of the following application methods:

1. Electrostatic spray application;

2. HVLP spray;

3. Flow coat;

d. Roller coat;

4. Dip coat, including electrodeposition;

5. Airless spray;

6. Air-assisted airless spray; or

7. A coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by the Director and EPA.

19.7.7 Miscellaneous Metal and /or Plastic Part Coating

A. The owner and operator of any miscellaneous metal and/ or plastic parts coating operation, that meets the applicability threshold in § 19.6.7 of this Part, shall use one of the following methods to achieve compliance with this Part.

1. Use only low-VOC coatings that have an as applied VOC content, minus water and exempt compounds that does not exceed the applicable VOC content limitations in § 19.7.7(A)(1)(b) and/or §§ 19.7.7(A)(1)(d) through (h) of this Part, as applicable;

a. Prior to July 1, 2020, for miscellaneous metal parts, the VOC content of the as applied coating, minus water and exempt compounds, shall not exceed the VOC content limitations in § 19.7.7(A)(1)(b) of this Part.

b. Miscellaneous metal parts VOC content limitations in pounds of VOC per gallon of coating minus water and exempt compounds, as applied, effective prior to July 1, 2020.

Category	lbs. VOC/gallon of coating, as applied
Clear Coating	4.3
Steel Pail and Drum Interiors	4.3
Air Dried Coating	3.5
Extreme Performance Coating	3.5
All other coating on misc. metal parts	3.0

c. Effective July 1, 2020, the VOC content of the as applied coating shall not exceed the applicable VOC emissions limitations in pounds of VOC per gallon of coating minus water and exempt compounds, in §§ 19.7.7(A)(1)(d) through (h) of this Part, as applicable.

d. Miscellaneous metal parts and products VOC content limitations in pounds of VOC per gallon of coating minus water and exempt compounds, as applied (not including pleasure craft coating) effective July 1, 2020.

	Air Dried	Baked
Coating Category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
General One Component	2.8	2.3
General Multi Component	2.8	2.3
Camouflage	3.5	3.5
Electric-Insulating Varnish	3.5	3.5
Etching Filler	3.5	3.5
Extreme High-Gloss	3.5	3
Extreme Performance	3.5	3
Heat-Resistant	3.5	3
High Performance Architectural	6.2	6.2
High Temperature	3.5	3.5
Metallic	3.5	3.5
Military Specification	2.8	2.3
Mold-Seal	3.5	3.5
Pan Backing	3.5	3.5

	Air Dried	Baked
Coating Category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
Prefabricated Architectural Multi-Component	3.5	2.3
Prefabricated Architectural One-Component	3.5	2.3
Pretreatment Coatings	3.5	3.5
Repair and Touch Up	3.5	3
Silicone Release	3.5	3.5
Solar-Absorbent	3.5	3
Vacuum-Metalizing	3.5	3.5
Drum Coating, New, Exterior	2.8	2.8
Drum Coating, New, Interior	3.5	3.5
Drum Coating, Reconditioned, Exterior	3.5	3.5
Drum Coating, Reconditioned, Interior	4.2	4.2

e. Miscellaneous plastic parts and products VOC content limitations in pounds of VOC per gallon of coating minus water and exempt compounds, as applied (not including automotive/transportation,

business machine and pleasure craft coating) effective July 1, 2020.

Coating category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
General One Component	2.3
General Multi Component	3.5
Electric Dissipating Coatings and Shock-Free Coatings	6.7
Extreme Performance	3.5 (2-pack coatings)
Metallic	3.5
Military Specification	2.8 (1 pack) 3.5 (2 pack)
Mold-Seal	6.3
Multi-colored Coatings	5.7
Optical Coatings	6.7
Vacuum-Metalizing	

f. Pleasure craft coating VOC content limitations in pounds of VOC per gallon of coating minus water and exempt compounds, as applied effective July 1, 2020.

Coating category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
Extreme High Gloss Topcoat	5.0
High Gloss Topcoat	3.5

Coating category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
Pretreatment Wash Primers	6.5
Finish Primer/Surfacer	3.5
High Build Primer Surfacer	2.8
Aluminum Substrate Antifoulant Coating	4.7
Antifouling Sealer/Tie Coat	3.5
Other Substrate Antifoulant Coating	3.3
All other pleasure craft coatings for metal or plastic	3.5

g. Automotive/transportation plastic part coating VOC content limitations in pounds of VOC per gallon of coating minus water and exempt compounds, as applied effective July 1, 2020.

Coating category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
High Bake Coatings – Interior and Exterior Parts	
- Flexible Primer	4.5
- Non-Flexible Primer	3.5
- Base Coats	4.3
- Clear Coat	4.0
- Non-basecoat/clear coat	4.3

Coating category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
Low Bake/Air Dried Coatings – Exterior Parts	
- Primers	4.8
- Basecoat	5.0
- Clearcoats	4.5
- Non-basecoat/clearcoat	5.0
Low Bake/Air Dried Coatings – Interior Parts	5.0
Touch up and Repair Coatings	5.2

h. Business machine plastic part VOC content limitations in pounds of VOC per gallon of coating minus water and exempt compounds, as applied effective July 1, 2020.

Category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
Primers	2.9
Topcoat	2.9
Texture coat	2.9
Fog Coat	2.2
Touch up and Repair coatings	2.9

2. Use a combination of low-VOC coating and add on control equipment meeting the as applied VOC content, expressed in pounds of VOC per gallon of solids as applied, in § 19.7.7(A)(2)(b) and/or §§ 19.7.7(A)(2)(d) through (h) of this Part, as applicable.

   a. Prior to July 1, 2020, miscellaneous metal part coating operations using a combination of low VOC coating and add-on control equipment shall not exceed the VOC content limitations, expressed in pounds of VOC per gallon of solids as applied, in § 19.7.7(A)(2)(b) of this Part.

   b. Miscellaneous metal parts VOC content limitations in pounds of VOC per gallon of solids, as applied effective prior to July 1, 2020.

Category	lbs. VOC/gallon of solids, as applied
Clear Coating	10.34
Steel Pail and Drum Interiors	10.34
Air Dried Coating	6.67
Extreme Performance Coating	6.67
All other coating on misc. metal parts	5.06

   c. Effective July 1, 2020, miscellaneous metal and/or plastic parts and products coating operations using a combination of low VOC coating and add-on control equipment shall not exceed the applicable emissions limitations expressed in pounds of VOC per gallon of solids as applied in §§ 19.7.7(A)(2)(d) through (h) of this Part.

   d. Miscellaneous metal parts and products VOC content limitations in pounds of VOC per gallon of solids, as applied (not including pleasure craft coating) effective July 1, 2020.

Coating category	Air Dried	Baked
	lbs. VOC per gal solids, as	lbs. VOC per gal

	applied	solids, as applied
General One Component	4.52	3.35
General Multi Component	4.52	3.35
Camouflage	6.67	6.67
Electric-Insulating Varnish	6.67	6.67
Etching Filler	6.67	6.67
Extreme High-Gloss	6.67	5.06
Extreme Performance	6.67	5.06
Heat-Resistant	6.67	5.06
High Performance Architectural	38	38
High Temperature	6.67	6.67
Metallic	6.67	6.67
Military Specification	4.52	3.35
Mold-Seal	6.67	6.67
Pan Backing	6.67	6.67
Prefabricated Architectural Multi-Component	6.67	3.35
Prefabricated Architectural One-Component	6.67	3.35
Pretreatment Coatings	6.67	6.67

Silicone Release	6.67	6.67
Solar-Absorbent	6.67	5.06
Vacuum-Metalizing	6.67	6.67
Drum Coating, New, Exterior	4.52	4.52
Drum Coating, New, Interior	6.67	6.67
Drum Coating, Reconditioned, Exterior	6.67	6.67
Drum Coating, Reconditioned, Interior	9.78	9.78

e. Miscellaneous plastic parts and products VOC content limitations in pounds of VOC per gallon of solids, as applied (not including automotive/transportation, business machine and pleasure craft coating) effective July 1, 2020.

Coating category	lbs. VOC/gal solids, as applied
General One Component	3.35
General Multi Component	6.67
Electric Dissipating Coatings and Shock-Free Coatings	74.7
Extreme Performance	6.67 (2-pack coatings)
Metallic	6.67
Military Specification	4.52 (1 pack)

Coating category	lbs. VOC/gal solids, as applied
	6.67 (2 pack)
Mold-Seal	43.7
Multi-colored Coatings	25.3
Optical Coatings	74.7
Vacuum-Metalizing	74.7

f. Pleasure Craft Coating VOC content limitations in pounds of VOC per gallon of solids, as applied effective July 1, 2020.

Coating category	lbs. VOC/gal solids, as applied
Extreme High Gloss Topcoat	9.2
High Gloss Topcoat	6.7
Pretreatment Wash Primers	55.6
Finish Primer/Surfacer	6.7
High Build Primer Surfacer	4.6
Aluminum Substrate Antifoulant Coating	12.8
Other Substrate Antifoulant Coating	4.4
All other pleasure craft coatings for metal or plastic	6.7

g. Automotive/Transportation Plastic Parts VOC content limitations in pounds of VOC per gallon of solids, as applied effective July 1, 2020.

Coating category	lbs. VOC/gal solids, as applied
High Bake Coatings – Interior and Exterior Parts	
- Flexible Primer	11.58
- Non-Flexible Primer	6.67
- Base Coats	10.34
- Clear Coat	8.76
- Non-basecoat/clear coat	10.34
Low Bake/Air Dried Coatings – Exterior Parts	
- Primers	13.80
- Basecoat	15.59
- Clearcoats	11.58
- Non-basecoat/clearcoat	15.59
Interior Parts - Low Bake/Air Dried Coatings	15.59
Touch up and Repair Coatings	17.72

(1) For red, yellow and black automotive coatings, except touch up and repair coatings, the limit is determined by multiplying the appropriate limit in this table by 1.15.

h. Business Machine Plastic Parts VOC content limitations in pounds of VOC per gallon of solids, as applied effective July 1, 2020.

Coating Category	lbs. VOC/gallon of solids, as applied

Primers	4.80
Topcoat	4.80
Texture coat	4.80
Fog Coat	3.14
Touch up and Repair coatings	4.80

3. Use of daily-weighted averaging for each coating unit, as determined by the procedures in § 19.13(D) of this Part, to achieve the applicable VOC content limitations in §§ 19.7.7(A)(1) or (2) of this Part;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

B. The owner and operator of any miscellaneous metal and/or plastic parts coating operation that meets the applicability threshold in § 19.6 7 of this Part, shall use one or more of the following application methods except when complying using add-on air pollution control equipment under § 19.7.7(A)(4) of this Part:

1. Electrostatic spray application;

2. HVLP spray;

3. Flow coat;

4. Roller coat;

5. Dip coat, including electrodeposition;

6. Airless spray;

7. Air-assisted airless spray; or

8. A coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by the Director and EPA.

19.7.8 Paper, Film and Foil

A. The owner and operator of a paper coating process which meets the applicability threshold in § 19.6.8(A) of this Part, shall use one of the following methods to control emissions of VOCs:

1. Use low-VOC coatings that do not exceed the emission limitation in § 19.7.8(A)(1)(a) of this Part.

a. Paper VOC content limitation in pounds of VOC per gallon of coating minus water and exempt compounds, as applied.

Coating category	lbs. VOC/gallon of coating, minus water and exempt compounds, as applied
Paper	2.9

2. Use a combination of low-VOC coating and add-on control equipment that does not exceed the VOC content emissions limitation in §19.7.8(A)(2)(a) of this Part.

a. Paper VOC content limitation in pounds of VOC per gallon of solids, as applied.

Coating category	lbs. VOC/gallon of solids, as applied
Paper	4.79

3. Use of daily-weighted averaging, as determined by the procedures in § 19.13(D) of this Part, to achieve the VOC content limitation in §§ 19.7.8(A)(1) or (2) of this Part;

4. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

5. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

B. Effective July 1, 2020 the owner and operator of any paper, film and foil coating line with any individual paper, film or foil coating line that meets the applicability threshold in § 19.6.8(B) of this Part, shall use one of the following methods to control emissions of VOCs:

1. Use only low-VOC coatings that have an as applied VOC content, as calculated using the equation in § 19.13(B) of this Part, that does not exceed the VOC content limitations in § 19.7.8(B)(1)(a) of this Part;

a. Paper, film or foil VOC content limitations effective July 1, 2020.

Coating category	lbs. VOC/lb of coating, as applied	Lbs. VOC per lb solids
Paper, film or foil (non-pressure sensitive tape and label)	0.08	0.4
Paper, film or foil (pressure sensitive tape and label)	0.067	0.20

2. Use of daily-weighted averaging, as determined by the procedures in § 19.13(D) of this Part, to achieve the VOC content limitations in § 19.7.8(B)(1)(a) of this Part; or

3. In lieu of the use of low-VOC coatings, in accordance with the requirements of Part 9 of this Subchapter (Air Pollution Control Permits), install an approved control system to achieve an overall VOC control efficiency of at least ninety percent (90%); or

4. An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

19.7.9 Alternative RACT

A. The emission limitations set forth in §§ 19.7.1 through 8 of this Part may be relaxed on a case-by-case basis if:

1. The owner of operator of the subject facility submits for approval by the Director and EPA:

a. Economic and/or technical documentation to the satisfaction of the Department and EPA that the applicable emission limitations set forth in §§ 19.7.1 through 8 of this Part cannot feasibly be met, and,

b. A proposal to set applicable emission limitations different from those of §§ 19.7.1 through 8 of this Part that will represent an Alternative Reasonably Available Control Technology; and,

c. A schedule for attaining the Alternative Reasonably Available Control Technology emission limitations within two (2) years of its being approved.

2. All compliance date and emission limitation relaxations made under § 19.7.9(A)(1) of this Part will not be final until approved by EPA as a SIP revision.

3. A relaxation of the applicable emissions limitations in § 19.7 of this Part will be approved only if the facility can demonstrate that economically, technically or both that neither coating reformulation nor the installation of a control system is feasible or even partially feasible.

4. The facility will undergo Reasonably Available Control Technology review every three (3) years after the compliance date as determined in § 19.7.9(A)(1)(c) of this Part until the final applicable emission limitation is achieved as defined in § 19.7 of this Part.

19.8 Work Practice Standards

A. The owner or operator of a coating facility meeting the applicability requirements in § 19.6 of this Part shall implement the following work practices for coating related activities:

1. Store all new and used VOC-containing coating, thinners or coating related waste in closed containers;

2. Ensure that mixing and storage containers used for VOC-containing coatings, thinners, and coating-related waste materials are kept closed at all times except when depositing or removing these materials;

3. Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; and

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

B. The owner or operator of a coating facility meeting the applicability requirements in § 19.6 of this Part shall implement the following work practices for cleaning related activities:

1. Store all VOC-containing cleaning materials and used shop towels in closed containers;

2. Ensure that storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;

3. Minimize spills of VOC-containing cleaning materials;

4. Convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and

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

19.9 Compliance Schedule

A. The owner or operator of an existing coating operation that meets any of the applicability thresholds in §§ 19.6.1 through 19.6.8 of this Part shall achieve compliance with the applicable emission limitations in § 19.7 of this Part or, if applicable, apply to the Director for an exemption under § 19.6.9(C) of this Part or apply for alternative RACT under § 19.7.9 of this Part, by July 1, 2020.

B. The owner or operator of an existing coating operation that does not meet any of the applicability thresholds in §§ 19.6.1 through 19.6.8 of this Part, as of the effective date of this regulation, shall achieve compliance with the applicable emissions limitations in § 19.7 of this Part or, if applicable, apply to the Director for an exemption under § 19.6.9(C) of this Part or apply for alternative RACT under § 19.7.9 of this Part, within one year of becoming subject to any of the applicability thresholds in §§ 19.6.1 through 19.6.8 of this Part.

C The owner or operator of any coating facility for which construction commenced on or after the July 1, 2020, that expects to meet or exceed any of the applicability thresholds in §§ 19.6.1 through 19.6.8 of this Part shall be in compliance with the applicable emissions limitations in § 19.7 of this Part upon commencing operation.

D. The compliance schedule shall not allow a coating facility to supersede any applicable emission limitations including but not limited to:

1. Best Available Control Technology determinations, or,

2. Lowest Achievable Emissions Rate determinations, or,

3. Federal New Source Performance Standards, or National Emission Standards of Hazardous Air Pollutants, or,

4. Any other condition or standard that is specifically required by the Clean Air Act (as amended) for new or modified sources.

19.10 Recordkeeping and Reporting

A. Recordkeeping

1. The owner or operator of a coating operation subject to this regulation shall maintain records of information sufficient to determine compliance with the applicable requirements of this regulation, including at minimum the following information for each calendar month for each coating line or operation and maintain the information at the facility for a period of five (5) years:

    a. The name, description (coating category) and amount used of each coating, on each coating line or operation;

    b. The type and amount of solvent used for diluents and cleanup operations;

    c. The mass of VOC per volume of each coating minus water and exempt compounds (excluding water), as applied, used each month on each coating line or operation.

    d. A Safety Data Sheet, a Certified Product Data Sheet or equivalent for each coating, diluent or cleaning solvent used.

2. The owner or operator of a coating unit complying by the means of daily-weighted averaging shall collect and record all of the following information each day for each coating unit and maintain the information at the facility for a period of five (5) years:

    a. The name and identification number of each coating, as applied, on each coating unit,

    b. The mass of VOC per volume coating (excluding water) and the volume of each coating (excluding water), as applied, used each day on each coating unit,

    c. The daily-weighted average VOC content of all coatings, as applied on each coating unit calculated according to the procedure in, § 19.13(D) of this Part,

d. The type and amount of solvent used for diluents and cleanup operations.

3. The owner or operator of a coating line or operation complying by means of add-on control equipment shall in addition to the recordkeeping requirements in § 19.10(A) of this Part maintain the following:

a. A log of operating time for the capture system, control device, monitoring equipment, and the associated coating line or operation;

b. A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages;

c. For condensers:

(1) Design inlet temperature of cooling medium and design exhaust gas temperature.

d. For thermal incinerators:

(1) Design combustion temperature;

(2) All three-hour periods of operation in which the average combustion temperature was more than twenty-eight degrees Celsius (28ºC) or fifty degrees Fahrenheit (50ºF) below the average combustion temperature during the most recent performance test that demonstrated that the facility was in compliance, and,

(3) The operating temperature.

e. For catalytic incinerators:

(1) Design exhaust gas temperature, design temperature rise across catalyst bed, anticipated frequency of catalyst change, and catalyst changes;

(2) All periods where the temperature increase across the catalyst bed is less than eighty percent (80%) of the temperature increase recorded during the most recent performance test that demonstrated that the facility was in compliance, and,

(3) The inlet and outlet temperatures and temperature rise across the catalyst bed.

f. For carbon adsorbers:

(1) Design pressure drop across the adsorber and design VOC concentration at breakthrough.

(2) All three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than twenty percent (20%) greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the facility was in compliance, and,

(3) The pressure drop across the adsorber and the hydrocarbon levels for breakthrough.

g. Results of compliance tests and associated calculations demonstrating a ninety percent (90%) overall reduction of VOC emissions from subject lines or reduction of emissions to the equivalent of the applicable VOC content limitations of § 19.7 of this Part as calculated on a solids applied basis. Overall reduction efficiency shall be calculated as the product of the capture efficiency and the control device destruction or removal efficiency. Testing shall be performed according to § 19.12 of this Part. Capture efficiency shall be determined by methods approved by the Department and EPA.

B. Reporting

1. The owner or operator of a subject coating line or operation shall:

a. Notify the Director of any record showing use of any non-complying coatings by sending a copy of such record to the Director within thirty (30) calendar days following that use;

b. Notify the Director of any record showing noncompliance with the applicable daily weighted average requirements by sending a copy of the record to the Director within thirty (30) calendar days following the occurrence, and,

c. Notify the Director of any record showing noncompliance with the applicable requirements for control devices by sending a copy of the record to the Director within thirty (30) calendar days following the occurrence.

d. Notify the Director at least thirty (30) calendar days before changing the method of compliance.

19.11 Registration

A. Any person who meets the applicability thresholds in § 19.6 of this Part must register annually with the Office of Air Resources. This requirement may be fulfilled by submission of the annual air pollution inventory required in Part 14 of this Subchapter (Record Keeping and Reporting). By April 15th of each year, the following information must be submitted:

1. The name and address of the company and the name and telephone number of a responsible corporate official submitting the registration, and,

2. A description of all operations in the facility where volatile organic compounds are emitted, and,

3. Quantities of coatings, solvents, dissolvers, viscosity reducers, diluents, thinners, reagents, cleaning agents, enamels, lacquers, or paints consumed during the previous calendar year, and,

4. The amount of volatile organic compound per gallon of coating solution (pounds per gallon) for each coating, enamel, lacquer, or paint consumed at the facility during the previous calendar year.

19.12 Compliance Demonstration/Testing

A. Compliance with applicable emission limitations of § 19.7 of this Part shall be demonstrated in accordance with 40 C.F.R §. 60, Appendix A-7, Methods 24, 24A, 25, 25A incorporated in § 19.4 of this Part or any other EPA approved method which has been accepted by the Director and EPA. A one hour bake time must be used for 40 C.F.R. § 60 Appendix A-7 Methods 24 and 24A, incorporated in § 19.4 of this Part and, further, 40 C.F.R. § 60 Appendix A-7 Methods 24 and 24A, incorporated in § 19.4 of this Part apply to multicomponent coatings.

1. Manufacturer's formulation data may be used to demonstrate compliance with VOC content limitations in lieu of 40 C.F.R § 60, Appendix A-7, Methods 24 testing, incorporated in § 19.4 of this Part. In the case of a dispute, the VOC content determined using 40 C.F.R § 60, Appendix A-7,

Methods 24, incorporated in § 19.4 of this Part shall prevail, unless a person is able to demonstrate to the Department and EPA that the manufacturer's formulation data are correct.

B. Facilities using add on controls to comply with RACT must show that the equipment meets specific capture and control efficiency limits which will be set in an enforceable document. Control efficiency of the equipment will be determined using EPA-approved test methods. Calculations will be done on a solids applied basis. Continuous compliance will be maintained at all times. Compliance averaging times will be met according to the control device chosen and EPA test methods, incorporated in § 19.4 of this Part as follows:

Compliance Method	EPA Reference Test Method	Test Averaging Time
Reformulation	40 C.F.R. § 60 Appendix A-7 Method 24 or 24A	instantaneous
Solvent destruction or solvent recovery except carbon adsorption	40 C.F.R. § 60 Appendix A-7 Method 25 or 25A	3 hours
Carbon adsorption	40 C.F.R. § 60 Appendix A-7 Method 25 or 25A or other test method as appropriate	The length of adsorption cycle or 24-hours, which-ever is less.

1. Or other methods approved by the Director and EPA. Once the control efficiency has been determined for any add-on control device by 40 C.F.R. § 60, Appendix A-7 Method 25 or 25A, incorporated in § 19.4 of this Part, or any alternative method approved by the Department and EPA, compliance shall be determined on an instantaneous basis time period (e.g. determined control efficiency shall be used to calculate whether samples from the process meet the applicable emissions limit.)

19.13 VOC Calculations

A. The VOC content of the as applied coating, expressed in units of pounds of VOC per gallon of coating, shall be calculated using equation 1:

Equation 1

$$VOC = \frac{(W_v + W_a - W_w - W_n)}{(V + V_a - V_w - V_n)}$$

Where:

VOC = The VOC content of a given coating, in pounds per gallon (lbs./gal);

W_v = Mass of total volatiles, in pounds;

W_a = Mass of total VOC in additives or other materials that are added to the coating prior to its application, in pounds;

W_w = Mass of the water in coating (if any), in pounds;

W_n = Mass of any non-VOC solvent in the coating, in pounds;

V = Volume of coating, in gallons;

V_a = Volume of VOC-containing additives or other materials that are added to the coating prior to its application, in gallons;

V_w = Volume of the water in coating (if any), in gallons; and

V_n = Volume of any non-VOC solvent in the coating, in gallons.

B. VOC content of the as applied coating, expressed in units of pounds of VOC per pound of coating solids, shall be calculated using equation 2:

Equation 2

$$VOC_B = (W_o)/(W_n)$$

Where:

VOC_B = VOC content in lbs. VOC/lb of coating solids

W_o = Weight percent of VOC (W_v-W_w-W_{ex})

W_v = Weight percent of total volatiles (100%-weight percent solids)

W_w = Weight percent of water

W_{ex} = Weight percent of exempt solvents

W_n = Weight percent of solids of the as applied coating

C. The VOC content of the as applied coating, expressed in units of pounds of VOC per gallon of coating solids, shall be calculated using equation 3:

Equation 3

$$VOC = (W_o)(D_C)/V_n$$

Where:

VOC = VOC Content in lbs. voc/gal of coating solids

W_o = Weight percent of VOC (W_v-W_w-W_{ex})

W_v = Weight percent of total volatiles (100%-weight percent solids)

W_w = Weight percent of water

W_{ex} = Weight percent of exempt solvents

D_C = Density of coating, lb/gal, at 25°C

V_n = Volume percent of solids of the as applied coating

D. Procedure for Calculating the Daily-Weighted Averages

1. The daily-weighted average VOC content, in units of mass of VOC per unit volume of coating, excluding water and exempt compounds, as applied, of the coatings used on a day on a coating line or operation shall be calculated using equation 4:

   Equation 4

$$VOC_w = \frac{\sum_{i=1}^{n} V_i \ C_i}{V_T}$$

Where:

VOC_w = The daily-weighted average VOC content of the coatings, as applied, used on a coating line or operation in units of pounds of VOC per gallon of coating, excluding water and exempt compounds;

n = The number of different coatings, as applied, each day on a coating line or operation;

V_i = The volume of each coating (i), as applied, used in a day on a coating line or operation in units of gallons, excluding water and exempt compounds;

C_i = The VOC content of each coating (i), as applied, used in a day on a coating line or operation in units of pounds VOC per gallon of coating, excluding water and exempt compounds; and,

V_T = The total volume of all coating, as applied, used in a day on a coating line or operation in units of gallons, excluding water and exempt compounds.

2. The daily-weighted average VOC content, as applied, of the coatings used on a coating line or operation in units of mass of VOC per unit volume of coating solids shall be calculated by equation 5:

Equation 5

$$VOC_{ws} = \frac{\sum_{i=1}^{n} W_{VOCi} \ D_i \ V_i}{\sum_{i=1}^{n} V_i \ VS_i}$$

VOC_{ws} = The daily-weighted average VOC content, as applied, of the coatings used on a coating line or operation in units of mass of VOC per

unit volume of coating solids;

n = The number of different coatings, as applied, used in a day on a coating line or operation;

V_i = The volume of each coating (i), as applied, used in a day on a coating line or operation in units of gallons,

W_{VOCi} = The weight fraction of VOC in each coating (i), as applied, used in a day on a coating line or operation in units of pounds VOC per pound of coating;

D_i = The density of each coating (i) as applied, used in a day on a coating line or operation in units of pounds VOC per gallon of coating (lb./gal); and

VS_i = The volume fraction solids content of each coating (i), as applied, used in a day on a coating line or operation in units of gallons solids/gallons coating.

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TITLE 250 - DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CHAPTER 120 - AIR RESOURCES

SUBCHAPTER 05 - AIR POLLUTION CONTROL

PART 19 - CONTROL OF VOLATILE ORGANIC COMPOUNDS FROM SURFACE COATING OPERATIONS (250-RICR-120-05-19)

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