1124 Control of Volatile Organic Compound Emissions

22.0 Coating of Miscellaneous Metal Parts

~~01/11/1993~~ xx/xx/2010

22.1 Applicability

22.1.1 The provisions of 22.0 of this regulation apply to any miscellaneous metal parts and products coating unit. Except as provided in 22.1.2 of this regulation, every owner or operator of any miscellaneous metal parts and products coating unit shall comply with the provisions of 22.0 of this regulation on and after xx/xx/2010.

22.1.2 ~~The provisions of 22.0 of this regulation do not apply to the coating of the following metal parts and products that are covered by other sections of this regulation:~~

Transition period for existing permitted sources. Every owner or operator of any miscellaneous metal parts and products coating unit that has a permit issued pursuant to 7 **DE Admin Code** 1102 or 1130 containing all applicable conditions of 22.0 of this regulation, as that regulation existed on January 11, 1993, shall comply with those permit conditions until December 31, 2010. On and after January 1, 2011, every such owner or operator of any miscellaneous metal parts and products coating unit shall comply with the provisions of 22.0 of this regulation.

~~22.1.2.1 Automobiles and light-duty trucks.~~

~~22.1.2.2 Metal cans.~~

~~22.1.2.3 Flat metal sheets and strips in the form of rolls or coils.~~

~~22.1.2.4 Magnet wire for use in electrical machinery.~~

~~22.1.2.5 Metal furniture.~~

~~22.1.2.6 Large appliances.~~

~~22.1.2.7 Heavy-duty trucks that use electrode position (EDP) to apply prime coat, which are covered under 13.3.4, 13.6 and 13.9 of this regulation.~~

22.1.3 The provisions of 22.0 of this regulation do~~es~~ not apply to the following miscellaneous metal parts and products~~:~~

~~22.1.3.1 Exterior of completely assembled aircraft.~~

~~22.1.3.2 Exterior of major aircraft subassemblies, if approved by the Department as part of a State Implementation Plan (SIP) revision.~~

~~22.1.3.3 Automobile, light-duty truck, and heavy-duty truck refinishing.~~

~~22.1.3.4 Customized top coating of automobiles and trucks, if production is less than 35 vehicles per day.~~

22.1.3.1 Parts covered by other sections of this regulation.

22.1.3.2 Exterior parts of completely assembled marine vessels.

~~22.1.3.6 Exterior of major marine vessel subassemblies if approved by the Department as part of a SIP revision.~~

22.1.4 Except as provided in 22.1.5 of this regulation, the ~~The~~ provisions of ~~emission limits in~~ 22.0 of this regulation do not apply to metal parts and products coating facilities ~~any coating unit within a facility~~ whose actual emissions, without control devices, from all miscellaneous metal part and products coating units ~~within the facility~~, including emissions from related cleaning activities, are less than 6.8 kilograms (kg) (15 pounds [lb]) of volatile organic compounds (VOCs) per day.

22.1.5 An owner or operator of a facility whose emissions are below the applicability threshold in 22.1.4 of this regulation shall comply with the certification, recordkeeping, and reporting requirements of 22.7.1 of this regulation.

22.1.6 Any facility that becomes or is currently subject to the provisions of 22.0 of this regulation by exceeding the applicability threshold in 22.1.4 of this regulation shall ~~will~~ remain subject to these provisions even if ~~its~~ emissions later fall below the applicability threshold.

22.1.7 Any facility that is currently subject to a state or federal rule promulgated pursuant to the Clean Air Act Amendments of 1977 by exceeding an applicability threshold is and shall ~~will~~ remain subject to these provisions, even if ~~its throughput or~~ emissions ~~have fallen or~~ later fall below the applicability threshold.

22.2 Definitions. As used in 22.0 of this regulation, all terms not defined herein shall have the meaning given them in the November 15, 1990 Clean Air Act Amendments (CAAA), or in 2.0 of this regulation.

"Air-dried coating" means a coating that is cured at a temperature below ~~dried by the use of air or forced warm air at temperatures up to~~ 90^0 C (194^0 F).

"Baked coating" means a coating that is cured at a temperature at or above 90^o C (194^0 F).

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

~~"**Clear coating**" means a coating that (1) either lacks color and opacity or is transparent and (2) uses the surface to which it is applied as a reflective base or undertone color.~~

"Drum" means any cylindrical metal shipping container larger than 12 gallons capacity, but no larger than ~~of 13 to~~ 110 gallons capacity.

"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.

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

~~"**Extreme environmental conditions**" means any of the following: the weather all of the time, temperatures frequently above 95°C (203°F), detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.~~

~~"**Extreme performance coatings**" means coatings intended for exposure to extreme environmental conditions.~~

"High-performance architectural coating" means a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Associations 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 1000^0 F for 24 hours.

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

"Miscellaneous metal parts and products coating unit" means a coating unit in which a coating is applied to any miscellaneous metal parts and products.

"Miscellaneous metal parts and products" means any metal part or metal product, even if attached to or combined with a nonmetal part or product. Miscellaneous metal parts and products include, but are not limited to:

(1) Large farm machinery (harvesting, fertilizing and planting machines, tractors, combines, etc.);

(2) Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);

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

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

(5) Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);

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

(7) Any other metal part or product that is within one of the following Standard Industrial Classification Codes, Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous instruments), and Major Group 39 (miscellaneous manufacturing industries);

~~8. Application of underbody anti-chip materials (e.g., underbody plastisol) and coating application operations other than prime, primer surfacer, topcoat, and final repair operations at automobile and light-duty truck assembly plants.~~

"Pail" means any cylindrical metal shipping container of 1- to 12-gallon capacity and constructed of 29-gauge and heavier material.

"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.

"Prefabricated architectural component coating" means a coating applied to metal parts and products which is to be used as an architectural structure.

~~"**Refinishing**" means repainting used equipment.~~

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

22.3 Standards

~~22.3.1 No owner or operator of a miscellaneous metal parts and products coating unit subject to 22.0 of this regulation shall cause or allow the application of any coating with VOC content in excess of the emission limits in 22.3.1.1 through 22.3.1.5 of this regulation.~~

		~~kg/L~~ [a]	~~lb/gal~~ [a]
~~22.3.1.1~~	~~Clear coating~~	~~0.52~~	~~4.3~~
~~22.3.1.2~~	~~Steel pail and drum interior coating~~	~~0.52~~	~~4.3~~
~~22.3.1.3~~	~~Air-dried coating~~	~~0.42~~	~~3.5~~
~~22.3.1.4~~	~~Extreme performance coating~~	~~0.42~~	~~3.5~~
~~22.3.1.5~~	~~All other coatings~~	~~0.36~~	~~3.0~~

~~[a] VOC content values are expressed in units of mass of VOC (kg, lb) per volume of coating (liter [L], gallon [gal]), excluding water and exempt compounds, as applied.~~

~~22.3.2 If more than one emission limit in 22.3.1 of this regulation applies to a specific coating, then the least stringent emission limit shall be applied.~~

~~22.3.3 As an alternative to compliance with the emission limits in 22.3.1 of this regulation, an owner or operator of a miscellaneous metal parts and products coating unit may meet the requirements of 22.4 or 22.5 of this regulation.~~

~~22.4 Daily-weighted average limitations. No owner or operator of a miscellaneous metal parts and products coating unit that applies multiple coatings, all of which are subject to the same numerical emission limitation within 22.3.1 of this regulation, during the same day (e.g., all coatings used on the unit are subject to 0.42 kg/L [3.5 lb/gal]), shall apply, during any day, coatings on that unit whose daily weighted average VOC content calculated in accordance with the procedure specified in **Appendix C** of this regulation exceeds the coating VOC content limit corresponding to the category of coating used.~~

22.3.1 Except as provided for in 22.3.3, no owner or operator of a miscellaneous metal parts and products coating unit subject to 22.0 of this regulation shall cause or allow the application of any coating to miscellaneous metal parts and products unless:

22.3.1.1 The VOC content of the coating is less than or equal to the limits listed in Table 22-1 of this regulation, or

22.3.1.2 For a miscellaneous metal parts and products coating unit that applies multiple coatings, which are subject to the same numerical emission limitation in Table 22-1 of this regulation, the daily-weighted average VOC content, calculated in accordance with the procedure specified in **Appendix C** of this regulation, is less than or equal to the limit in Table 22-1 of this regulation corresponding to the category of coating used, or

22.3.1.3 Control equipment is installed and operated that achieves an emission reduction efficiency in accordance with 22.5 of this regulation. The requirements of 22.3.2 shall not

apply to any metal parts and products coating unit that achieves an emission reduction efficiency of 95% or greater.

22.3.2 Except as provided in 22.3.1.3 and 22.4, no owner or operator of a miscellaneous metal parts and products coating unit subject to 22.0 of this regulation shall apply a coating to miscellaneous metal parts and products unless the coating is applied with equipment properly operated and maintained according to the manufacturer's suggested guidelines and using one or more of the following coating application methods:

22.3.2.1 Electrostatic spray

22.3.2.2 Flow coating

22.3.2.3 Dip coating, including electrodeposition

22.3.2.4 Roll coating

22.3.2.5 High-volume, low-pressure (HVLP) spray

22.3.2.6 Hand application

22.3.2.7 An alternative method that is demonstrated to be capable of achieving a transfer efficiency equal to or better than HVLP spray and approved by the Department.

Table 22 – 1 Metal Parts and Products Coating VOC Content Limits

Table 22-1, coating VOC content limits are expressed as mass (kilogram [kg] or pound [lb]) per volume (liter [l] or gallon [gal]) of coating less water and exempt compounds, as applied

	Air Dried		Baked	
Coating Category	**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	0.36	3.0
ElectricInsulating Varnish	0.42	3.5	0.36	3.0
Etching Filler	0.42	3.5	0.36	3.0
Extreme HighGloss	0.42	3.5	0.36	3.0
Extreme Performance	0.42	3.5	0.36	3.0
HeatResistant	0.42	3.5	0.36	3.0
High Performance Architectural	0.42	3.5	0.36	3.0
High Temperature	0.42	3.5	0.36	3.0
Metallic	0.42	3.5	0.36	3.0
Military Specification	0.34	2.8	0.28	2.3
MoldSeal	0.42	3.5	0.36	3.0
Pan Backing	0.42	3.5	0.36	3.0

Prefabricated Architectural MultiComponent	0.42	3.5	0.28	2.3
Prefabricated Architectural OneComponent	0.42	3.5	0.28	2.3
Pretreatment Coatings	0.42	3.5	0.36	3.0
Repair and Touch Up	0.42	3.5	0.36	3.0
Silicone Release	0.42	3.5	0.42	3.5
SolarAbsorbent	0.42	3.5	0.36	3.0
VacuumMetalizing	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	0.36	3.0
Drum Coating, Reconditioned, Interior	0.50	4.2	0.50	4.2

22.4 Specific Exemptions:

22.4.1 The requirements of 22.3.1 and 22.3.2 of this regulation shall not apply to the following coatings and coating operations:

22.4.1.1 Stencil coatings

22.4.1.2 Safety indicating coatings

22.4.1.3 Solid-film lubricants

22.4.1.4 Electric-insulating and thermal conducting coatings

22.4.1.5 Magnetic data storage disc coatings, and,

22.4.1.6 Plastic extruded onto metal parts to form a coating

22.4.1.7 Coatings applied using hand-held aerosol cans

22.4.1.8 Powder coatings

22.4.2 The requirements of 22.3.2 of this regulation shall not apply to the following coatings and coating operations:

22.4.2.1 Texture coatings.

22.4.2.2 Repair and Touch up coatings

22.5 Control Devices

22.5.1 An owner or operator of a miscellaneous metal parts and products coating unit subject to 22.3.1.3 ~~22.0~~ of this regulation shall determine the emission reduction efficiency needed to comply and demonstrate compliance as follows ~~may comply with 22.0 of this regulation by~~:

~~22.5.1.1 Installing and operating a capture system on that unit.~~

~~22.5.1.2 Installing and operating a control device on that unit.~~

22.5.1.1 Determine ~~Determining~~ for each day the overall emission reduction efficiency needed to demonstrate compliance. The overall emission reduction needed for a day is the lesser of the value calculated according to the procedure in 3.3 ~~3.0~~ of **Appendix C** of this regulation for that day, or 95%.

22.5.1.2 Demonstrate ~~Demonstrating~~ each day that the overall emission reduction efficiency achieved for that day, as determined in ~~in 3.0 of~~ **Appendix D** of this regulation, is greater than or equal to the overall emission reduction efficiency required for that day.

22.5.2 An owner or operator of a miscellaneous metal parts and products coating unit subject to 22.3.1.3 ~~22.0~~ of this regulation shall ensure that:

22.5.2.1 A capture system and control device are operated at all times that the unit is in operation, and the owner or operator demonstrates compliance with 22.0 of this regulation through the applicable coating analysis and capture system and control device efficiency test methods specified in **Appendix B**, **Appendix D** and **Appendix E** of this regulation and in accordance with the capture efficiency test methods in **Appendix D** of this regulation.

22.5.2.2 The control device is equipped with the applicable monitoring equipment specified in 2.0 of **Appendix D** of this regulation, and the monitoring equipment is installed, calibrated, operated, and maintained according to the vendor's specifications at all times the control device is in use.

22.6 Test Methods. The test methods found in **Appendices A** through **D** of this regulation shall be used to determine compliance with 22.0 of this regulation.

22.6.1 The acid content of pretreatment coatings and etching fillers shall be determined by the ASTM International Method D-1613.

22.6.2 The metal particle content of metallic coatings shall be determined by the California South Coast Air Quality Management District (SCAQMD) Method 318 “Determination of Weight Percent of Elemental Metal in Coatings by X-Ray Diffraction Method” contained in the SCAQMD “Laboratory Methods of Analysis of Enforcement Samples” (for coatings containing aluminum) or by SCAQMD Method 311 “Analysis of Percent Metal in Metallic Coatings by Spectrographic Method” contained in the SCAQMD “Laboratory Method of Analysis of Enforcement Samples” (for coatings containing metals other than aluminum).

22.7 Compliance Certification, Recordkeeping, and R~~r~~eporting Requirements.

22.7.1 An owner or operator of a miscellaneous metal parts and products coating unit ~~that is~~ exempt from the emission ~~limitations~~ requirements in 22.3 of this regulation shall comply with the certification, recordkeeping, and reporting requirements ~~listed~~ in 4.2 of this regulation.

22.7.2 An owner or operator of a miscellaneous metal parts and products coating unit subject to 22.0 of this regulation and complying with 22.3.1.1 ~~22.3~~ of this regulation by the use of compliant ~~complying~~ coatings shall comply with the certification, recordkeeping, and reporting requirements in 4.3 of this regulation.

22.7.3 An owner or operator of a miscellaneous metal parts and products coating unit subject to 22.0 of this regulation and complying with 22.3.1.2 ~~22.4~~ of this regulation through the use of ~~by~~ daily-weighted averaging shall comply with the certification, recordkeeping, and reporting requirements in 4.4 of this regulation.

22.7.4 An owner or operator of a miscellaneous metal parts and products coating unit subject to 22.0 of this regulation and complying with 22.3.1.3 ~~22.5~~ of this regulation by the use of control devices shall comply with the testing, certification, reporting, and recordkeeping requirements listed in 4.5 of this regulation.

22.7.5 An owner or operator of a metal parts coating unit subject to 22.3.2 of this regulation shall maintain at the facility a copy of the equipment manufacturer's suggested operating and maintenance guidelines, and provide a copy to the Department upon request.