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(Proposed Amended Rule)
061011

RULE 1107. COATING OF METAL PARTS AND PRODUCTS

(a) Purpose and Applicability

The purpose of Rule 1107 is to reduce volatile organic compound (VOC) emissions from the coating of metal parts and products. This rule applies to all persons who use metal coatings or perform metal stripping operations, and all manufacturers, distributors and suppliers who supply, sell, or offer for sale metal coatings, except those performed on aerospace assembly, magnet wire, marine craft, motor vehicle, metal container, and coil coating operations. This rule does not apply to the coating of architectural components coated at the structure site or at a temporary unimproved location designated exclusively for the coating of structural components.

(b) Definitions

For the purpose of this rule, the following definitions shall apply:

(1) AEROSOL COATING PRODUCT is a pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marking applications.

(2) AIR-DRIED COATING is a coating that is cured at a temperature below 90°C (194°F).

(3) ALTERNATIVE EMISSION CONTROL PLAN is a plan that allows a source to demonstrate an alternative method of rule compliance, pursuant to Rule 108 - Alternative Emission Control Plans.

(4) BAKED COATING is a coating that is cured at a temperature at or above 90°C (194°F).

(5) CAMOUFLAGE COATING is a coating used, principally by the military, to conceal equipment from detection.

(6) CAPTURE EFFICIENCY is the percentage of volatile organic compounds used, emitted, evolved, or generated by the operation, that are collected and directed to an air pollution control device.

(7) CATALYST is a substance that alters the rate of chemical reaction without participating in that reaction or changing during the course of reaction.

(8) COATING is a material which is applied to a surface and which forms a continuous film in order to beautify and/or protect such surface.

(9) CONTRACT PAINTER is a non-manufacturer of metal parts and products who applies coatings to such products at his facility exclusively under contract with one or more parties that operate under separate ownership and control.

(10) DIP COATING is a method of applying coatings to a substrate by submersion into and removal from a coating bath.

(11) ELECTRIC-INSULATING VARNISH is 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.

(12) ELECTRIC-INSULATING AND THERMAL-CONDUCTING COATING is a coating that displays an electrical insulation of at least 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.

(13) ELECTROCOATING is a process that uses coating concentrates or pastes added to a water bath. The coating is applied by using an electrical current in either an anodic or cathodic process.

(14) ELECTROSTATIC APPLICATION is a method of applying coating particles or coating droplets to a grounded substrate by electrically charging them.

(15) ESSENTIAL PUBLIC SERVICE COATING is a protective (functional) coating applied to components of power, water, and natural gas production, transmission or distribution systems during repair and maintenance procedures.

(16) ETCHING FILLER is a coating that contains less than 23 percent solids by weight and at least 1/2-percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

(17) EXEMPT COMPOUNDS (see Rule 102-Definition of Terms).

(18) EXTREME HIGH-GLOSS COATING is a coating which, when tested by the American Society for Testing Material (ASTM) Test Method D-523 adopted in 1980, shows a reflectance of ~~75~~ 95 or more on a 60° meter.

(19) EXTREME-PERFORMANCE COATING is a coating used on a metal surface where the coated surface is, in its intended use, subject to the following:

(A) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution; or

(B) Repeated exposure to temperatures in excess of 250° F; or

(C) Repeated heavy abrasion which, when tested by ASTM D4060 using a CS 10 wheel with a 1,000 gram load, loses less than 50 mg of coating after 1,000 cycles~~including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers or scouring agents.~~; or

(D) Multi-substrate metal and carbon composite surfaces; or

(E) Other operations as approved by the Executive Officer provided that the applicator requests and receives written approval of such classification from the Executive Officer, or designee, prior to application of such coating, and shows that the intended use of each coated object would require coating with an extreme-performance coating pursuant to subdivision (i).

(20) FLOW COAT is a non-atomized technique of applying coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

(21) GRAMS OF VOC PER LITER OF COATING LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_S = weight of volatile compounds in grams

W_W = weight of water in grams

W_{es} = weight of exempt compounds in grams

V_m = volume of material in liters
V_w = volume of water in liters
V_{es} = volume of exempt compounds in liters

(22) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters

(23) GRAPHIC ARTS COATINGS (Sign Paints) are coatings formulated for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals, and include lettering enamels, poster colors, copy blockers, and bulletin enamels.

(~~24~~24) HAND APPLICATION METHODS is the application of coatings by manually held non-mechanically operated equipment. Such equipment includes paintbrushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(~~24~~25) HARDENER is a substance or mixture of substances that controls the viscosity of the reactants and products of a chemical reaction; while participating in chemical reaction and becoming part of the product or products of chemical reaction.

(~~25~~26) HEAT-RESISTANT COATING is a coating that must withstand a temperature of at least 400°F during normal use.

(27) HIGH-GLOSS COATING is a coating which, when tested by ASTM Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60° meter.

(~~26~~28) HIGH-PERFORMANCE ARCHITECTURAL COATING is a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 605.2-1980.

(~~27~~29) HIGH-TEMPERATURE COATING is a coating that is certified to withstand a temperature of 1000°F for 24 hours.

(~~28~~30) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is designed to be operated and which is operated between 0.1 and 10 pounds per square inch gauge (psig) air pressure, measured dynamically at the center of the air cap and the air horns.

(~~29~~31) INK is a fluid that contains dyes and/or colorants and is used to make markings but not to protect surfaces.

(32) LACQUERS are clear or pigmented finishes formulated with nitrocellulose or synthetic resins to dry by evaporation without chemical reaction.

(~~30~~33) MAGNETIC DATA STORAGE DISK COATING is a coating used on a metal disk which stores data magnetically.

(34) METAL COATINGS are coatings intended to be applied or are applied to metal parts or products.

(~~31~~35) METAL PARTICLES are pieces of an elemental pure metal or a combination of elemental metals.

(~~32~~36) METAL PARTS AND PRODUCTS are any components or complete units fabricated from metal, except those subject to the coating provisions of other source specific rules of Regulation XI.

(~~33~~37) METALLIC COATING is a coating which contains more than 5 grams of metal particles per liter of coating, as applied.

(~~34~~38) MIL is 0.001 inch.

(~~35~~39) MILITARY SPECIFICATION COATING is a coating applied to metal parts and products and which has a paint formulation approved by a United States Military Agency for use on military equipment.

(~~36~~40) MOLD-SEAL COATING is the initial coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

(~~37~~41) MOTOR VEHICLE is a passenger car, light-duty truck, medium-duty vehicle, or heavy-duty vehicle as defined in Section 1902, Title 13, of the California Administrative Code.

(~~38~~42) MULTI-COMPONENT COATING is a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

(~~39~~43) ONE-COMPONENT COATING is a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

(~~40~~44) OPTICAL ANTI-REFLECTION COATING is a coating with a low reflectance in the infrared and visible wavelength range and is used for anti-reflection on or near optical and laser hardware.

(~~41~~45) PAN-BACKING COATING is a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

(46) PERSON (see Rule 102-Definition of Terms).

(~~42~~47) PHOTORESIST COATING is a coating applied directly to a metal substrate to protect surface areas when chemical milling, etching, or other chemical surface operations are performed on the substrate.

(~~43~~48) PHOTORESIST OPERATION is a process for the application and development of photoresist coating on a metal substrate, including preparation (except primary cleaning), soft bake, development, hard bake, and stripping, and can be generally subdivided as follows:

(A) NEGATIVE PHOTORESIST OPERATION is a process where the photoresist hardens when exposed to light and the unhardened photoresist is stripped, exposing the metal surface for etching.

(B) POSITIVE PHOTORESIST OPERATION is a process where the photoresist softens when exposed to light and the softened photoresist is stripped, exposing the metal surface for etching.

(~~44~~49) PREFABRICATED ARCHITECTURAL COMPONENT COATINGS are coatings applied to metal parts and products ~~which~~ that are to be used as an architectural structure or their appurtenances including, but not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain-gutters and down-spouts, window screens, lamp-posts, heating and air conditioning equipment, other mechanical equipment and large fixed stationary tools.

(~~45~~50) PRETREATMENT COATING is a coating which contains no more than 12 percent solids by weight, and at least 1/2-percent acid, by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(51) PRIMERS are coatings applied to a surface to provide a firm bond between the substrate and subsequent coats.

(~~46~~52) REACTIVE DILUENT is a liquid which is a VOC during application and one in which, through chemical reaction such as polymerization, 20 percent or more of the VOC becomes an integral part of a finished coating.

For coatings that contain reactive diluents, the Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_S = weight of volatile compounds not consumed during curing, in grams

W_W = weight of water not consumed during curing, in grams

W_{es} weight of exempt compounds not consumed during curing, in grams

V_m = volume of the material prior to reaction, in liters

V_W = volume of water not consumed during curing, in liters

V_{es} = volume of exempt compounds not consumed during curing, in liters

(4753) REPAIR COATING is a coating used to recoat portions of a part or product which has sustained mechanical damage to the coating ~~following normal painting operations~~.

(4854) ROLL COAT is a coating method using a machine that applies coating to a substrate by continuously transferring coating through a pair or set of oppositely rotating rollers.

(4955) SAFETY-INDICATING COATING is a coating which changes physical characteristics, such as color, to indicate unsafe conditions.

(5056) SILICONE-RELEASE COATING is any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

(5157) SOLAR-ABSORBENT COATING is a coating which has as its prime purpose the absorption of solar radiation.

(5258) SOLID-FILM LUBRICANT is a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between faying surfaces.

(~~53~~59) STENCIL COATING is an ink or a coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers to metal parts and products.

(60) STRIPPING is the removal of cured coatings, cured inks, or cured adhesives.

(61) SUPER-COMPLIANT MATERIAL is any material containing 50 grams or less of VOC per liter of material.

(~~54~~62) TEXTURED FINISH is a rough surface produced by spraying and splattering large drops of coating onto a previously applied coating. The coatings used to form the appearance of the textured finish are referred to as textured coatings.

(~~55~~63) TOUCH-UP COATING is a coating used to cover minor coating imperfections appearing after the main coating operation.

(~~56~~64) TRANSFER EFFICIENCY is the ratio of the weight or volume of coating solids adhering to an object to the total weight or volume, respectively, of coating solids used in the application process, expressed as a percentage.

(~~57~~65) VACUUM-METALIZING COATING is the undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film.

(~~58~~66) VOLATILE ORGANIC COMPOUND (VOC) (see Rule 102-Definition of Terms).

(c) Requirements

(1) Operating Equipment

A person shall not apply VOC-containing coatings to metal parts and products subject to the provisions of this rule unless the coating is applied with equipment operated according to the equipment manufacturer specifications, and by the use of one of the following methods:

(A) Electrostatic application, or

(B) Flow coat, or

(C) Dip coat, or

(D) Roll coat, or

(E) High-Volume, Low-Pressure (HVLP) Spray, or

(F) Hand Application Methods, or

(G) Airless or air-assisted airless spray may also be used for metal coatings with a viscosity of 15,000 centipoise or greater, as applied, or

(~~G~~H) Such other coating application methods as are demonstrated to the Executive Officer to be capable of achieving a transfer efficiency equivalent or better to the method listed in subparagraph (c)(1)(E) and for which written approval of the Executive Officer has been obtained.

(2) VOC Content of Coatings

(A) Until December 31, 2012, ~~A~~ a person shall not apply any coatings ~~to metal parts and products~~ subject to ~~the provisions of~~ this rule ~~any coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer,~~ which contain VOC in excess of the limits specified in Table 1 below:

Table 1 – Coating Categories and VOC Limits

VOC LIMITS Less Water and Less Exempt Compounds Effective Dates								
Coating	**Air-Dried**				**Baked**			
	gm/l		**lb/gal**		**gm/l**		**lb/gal**	
	~~**Current**~~	~~**7/1/07**~~	~~**Current**~~	~~**7/1/07**~~	~~**Current**~~	~~**7/1/07**~~	~~**Current**~~	~~**7/1/07**~~
General One-Component	275	~~275~~	2.3	~~2.3~~	275	~~275~~	2.3	~~2.3~~
General Multi-Component	340	~~340~~	2.8	~~2.8~~	275	~~275~~	2.3	~~2.3~~
Military Specification	340	~~340~~	2.8	~~2.8~~	275	~~275~~	2.3	~~2.3~~
Etching Filler	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
Solar-Absorbent	420	~~420~~	3.5	~~3.5~~	360	~~360~~	3.0	~~3.0~~
Heat-Resistant	420	~~420~~	3.5	~~3.5~~	360	~~360~~	3.0	~~3.0~~
Extreme High-Gloss	~~420~~340	~~340~~	~~3.5~~2.8	~~2.8~~	360	~~360~~	3.0	~~3.0~~
Metallic	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
Extreme Performance	420	~~420~~	3.5	~~3.5~~	360	~~360~~	3.0	~~3.0~~
Prefabricated Architectural One-Component	~~420~~275	~~275~~	~~3.5~~2.3	~~2.3~~	275	~~275~~	2.3	~~2.3~~
Prefabricated Architectural Multi-Component	~~420~~340	~~340~~	~~3.5~~2.8	~~2.8~~	275	~~275~~	2.3	~~2.3~~
Touch Up	420	~~420~~	3.5	~~3.5~~	360	~~360~~	3.0	~~3.0~~
Repair	420	~~420~~	3.5	~~3.5~~	360	~~360~~	3.0	~~3.0~~
Silicone Release	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
High-Performance Architectural	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
Camouflage	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
Vacuum-Metalizing	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
Mold-Seal	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
High-Temperature	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~

VOC LIMITS (Continued) Less Water and Less Exempt Compounds Effective Dates								
Coating	**Air-Dried**				**Baked**			
	gm/l		**lb/gal**		**gm/l**		**lb/gal**	
	~~**Current**~~	~~**7/1/07**~~	~~**Current**~~	~~**7/1/07**~~	~~**Current**~~	~~**7/1/07**~~	~~**Current**~~	~~**7/1/07**~~
Electric-Insulating Varnish	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
Pan Backing	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~
Pretreatment Coatings	420	~~420~~	3.5	~~3.5~~	420	~~420~~	3.5	~~3.5~~

(B) Effective January 1, 2013, A person shall not apply any coatings subject to this rule which contain VOC in excess of the limits specified in Table 2 below:

Table 2 – Coating Categories and VOC Limits

VOC LIMITS **Less Water and Less Exempt Compounds** **Effective Dates**				
	Air-Dried		**Baked**	
	gm/l (lb/gal)		**gm/l (lb/gal)**	
Coating	**1/1/2013**	**1/1/2015**	**1/1/2013**	**1/1/2015**
General	275 (2.3)	100 (0.8)	275 (2.3)	100 (0.8)
Lacquer	275 (2.3)	275 (2.3)	275 (2.3)	275 (2.3)
Primer	275 (2.3)	100 (0.8)	275 (2.3)	100 (0.8)
Military Specification	340 (2.8)	340 (2.8)	275 (2.3)	275 (2.3)
Etching Filler	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Solar-Absorbent	420 (3.5)	420 (3.5)	360 (3.0)	360 (3.0)
Heat-Resistant	420 (3.5)	420 (3.5)	360 (3.0)	360 (3.0)
High-Gloss	275 (2.3)	100 (0.8)	275 (2.3)	100 (0.8)
Extreme High-Gloss	340 (2.8)	340 (2.8)	360 (3.0)	360 (3.0)
Metallic	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Extreme Performance	420 (3.5)	420 (3.5)	360 (3.0)	360 (3.0)
Prefabricated Architectural	100 (0.8)	100 (0.8)	100 (0.8)	100 (0.8)
Touch Up	420 (3.5)	420 (3.5)	360 (3.0)	360 (3.0)
Repair	420 (3.5)	420 (3.5)	360 (3.0)	360 (3.0)
Silicone Release	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Camouflage	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Vacuum-Metalizing	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Mold-Seal	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
High-Temperature	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Electric-Insulating Varnish	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Pan Backing	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Pretreatment Coatings	420 (3.5)	420 (3.5)	420 (3.5)	420 (3.5)
Graphic Arts	500 (4.2)	500 (4.2)	500 (4.2)	500 (4.2)

(3) Tertiary-Butyl acetate (TBAc) and dimethyl carbonate shall be considered exempt as a VOC in subparagraphs (c)(2)(A) and (c)(2)(B) for VOC content requirements provided:

(a) the operator applies and receives a permit to operate; and

(b) the coating is used in a spray booth or in a fully enclosed area where an exhaust fan discharges the exhaust air from the equipment outside of the building.

TBAc will continue to be considered a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling, and inventory requirements which apply to VOCs.

(~~3~~4) A person shall not use VOC-containing materials which have a VOC content of more than 200 grams per liter of material for stripping any coating governed by this rule.

(~~4~~5) Containers used for the disposal of cloth or paper used in stripping cured coating shall be closed except when depositing or removing the cloth or paper from the container.

(~~5~~6) Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

(~~6~~7) All VOC containing coatings shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times except when in use. ~~For coatings that contain reactive diluents, the Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds shall be calculated by the following equation:~~

~~Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds~~ $= \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$

~~Where:~~ ~~W_s~~ = ~~weight of volatile compounds not consumed during curing, in grams~~

~~W_w~~ = ~~weight of water not consumed during curing, in grams~~

~~W_{es}~~ ~~weight of exempt compounds not consumed during curing, in grams~~

~~V_m~~ = ~~volume of the material prior to reaction, in liters~~

~~V_w~~ = ~~volume of water not consumed during curing, in liters~~

~~V_{es}~~ = ~~volume of exempt compounds not consumed during curing, in liters~~

(~~7~~8) Owners and/or operators of control equipment may comply with provisions of paragraph (c)(1) and/or (c)(2) by using approved air pollution control equipment provided:

(A) the control device reduces VOC emissions from an emission collection system by at least 95 percent by weight or the output of the air pollution control device is no more than 5 PPM VOC by volume calculated as carbon with no dilution; and

(B) the owner/operator demonstrates that the emission collection system collects at least 90 percent by weight of the VOC emissions generated by the sources of VOC emissions.

(d) General Prohibitions ~~of Specifications~~

(1) A person shall not specify the use in the District of any coating to be applied to any metal parts and products subject to the provisions of this rule that does not meet the limits and requirements of this rule. The requirements of this paragraph shall apply to all written and oral contracts.

(2) Except as provided in subdivision (f), a person shall not apply, sell, distribute or offer for sale, manufacture, formulate, or repackage any metal coating~~s~~ for ~~the~~ use in the SCAQMD that, at the time of sale, exceeds the applicable VOC content specified in paragraph (c)(2).

(3) The prohibition of specifications and sales shall not apply to metal coatings shipped, supplied or sold to a person for use outside the SCAQMD or to coatings exclusively vented to air pollution control equipment that complies with the requirements of paragraph (c)(8).

(4) The prohibition of sale shall not apply to any manufacturer or supplier of metal coatings provided the coating was sold to an independent distributor that was informed in writing by the manufacturer or supplier of the condition that the metal coating is not to be used in the South Coast Air Quality Management District or that the metal coating does not comply with the VOC limits in paragraph (c)(2).

(5) The prohibition of sale shall not apply to metal coatings that clearly and correctly indicate on or are supplied with the coating container, that the coatings are intended for use on substrates other than metal, provided that the coating complies with the VOC limits in other Regulation XI rules. This requirement may be satisfied by furnishing a data sheet or by affixing a sticker or label which sets forth this information on the container.

(6) A person shall not supply, sell, offer for sale or use metal coatings or strippers subject to the provisions of this rule that contain in the excess of 0.1% by weight any Group II exempt compounds listed in Rule 102. Cyclic, branched, or linear, completely methylated siloxanes (VMS) are not subject to this prohibition.

(e) Methods of Analysis

All applicable methods of analysis shall be as cited in paragraphs (e)(1) through (e)(6) below, or any other applicable method approved by the Executive Officer, United States Environmental Protection Agency (USEPA), and the California Air Resources Board (CARB).

(1) Determination of VOC content

The volatile organic content of coatings subject to the provisions of this rule shall be determined by the following methods:

(A) USEPA Reference Method 24 (Code of Federal Regulations Title 40 Part 60, Appendix A). The exempt solvent content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

(B) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(C) Exempt Perfluorocarbon Compounds

The following classes of compounds:

cyclic, branched, or linear, completely fluorinated alkanes;

cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine,

will be analyzed as exempt compounds for compliance with paragraph (c), only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers must identify the USEPA, CARB, and the

SCAQMD approved test methods used to quantify the amount of each exempt compound.

(2) Determination of the Acid Content of Pretreatment Coatings and Etching Fillers

The acid content of pretreatment coatings and etching fillers shall be measured by ASTM Test Method D1613.

(3) Determination of the Metal Particle Content of Metallic Coatings

The metal particle content of metallic coatings subject to the provisions of this rule shall be determined by the following methods:

(A) SCAQMD Method 318 (Determination of Weight Percent of Elemental Metal in Coatings by X-ray Defraction Method) contained in the SCAQMD "Laboratory Method of Analysis of Enforcement Samples" manual for coatings containing elemental aluminum metal; or

(B) SCAQMD Method 311 (Analysis of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the SCAQMD "Laboratory Method of Analysis of Enforcement Samples" manual for all other non-aluminum particle content analyses.

(4) Determination of Efficiency of Emission Control System

(A) Capture efficiency specified in paragraph (c)(7), shall be determined by the procedures presented in the USEPA technical guidance document, "Guidelines for Determining Capture Efficiency, January 9, 1995." Notwithstanding the test methods specified by the Guidelines, any other method approved by the USEPA, CARB, and the SCAQMD Executive Officer may be substituted.

(B) The efficiency of the control device of the emission control system as specified in paragraph (c)(7) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by the USEPA Test Methods 25, 25A, SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon), or SCAQMD Method 25.3 (Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources) as applicable. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

(5) Multiple Test Methods

When more than one test method or set of methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(6) Demonstrations of transfer efficiency shall be conducted in accordance with SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989.

(7) Metal coating viscosity shall be determined by ASTM D 1084-88.

(8) Metal coating gloss shall be determined by ASTM Test Method D 523-80.

(f) Exemptions

(1) The provisions of paragraphs (c)(1) and (c)(2) of this rule shall not apply to:

(A) Stencil coatings;

(B) Safety-indicating coatings;

(C) Magnetic data storage disk coatings;

(D) Solid-film lubricants;

(E) Electric-insulating and thermal-conducting coatings.

(2) The provisions of paragraph (c)(1) of this rule shall not apply to the application of touch-up coatings, repair coatings, and textured finishes. ~~This exemption shall expire for the application of metallic coatings which have a metallic content of 30 grams per liter, mold seal coatings, and to facilities that use less than 3 gallons per day or less than 66 gallons per calendar month of coating, as applied, including an VOC containing materials added to the original coating as supplied by the manufacturer, effective July 1, 2006.~~

(3) The provisions of paragraphs (c)(1), (c)(2), and (c)(3) of this rule do not apply to the application of coatings and use of cleaning solvents while conducting performance tests on the coatings at paint manufacturing facilities.

~~(4) The provisions of paragraph (c)(2) of this rule shall not apply to high-performance architectural, vacuum-metalizing, and/or pretreatment coatings used at a facility which has the potential to emit a total of 10 tons or less per year of VOCs, before application of add-on controls.~~

(~~5~~4) The provisions of paragraph (c)(2) of this rule shall not apply to aerosol coating products.

(~~6~~5) The provisions of paragraph (c)(2) of this rule shall not apply to the use of essential public service coatings with VOC contents of 500 g/l or less provided such aggregate use does not exceed 55 gallons in any one calendar year per facility.

(~~7~~6) The provisions of paragraph (c)(2) of this rule shall not apply to the use of optical anti-reflective coatings provided such aggregate use does not exceed 10 gallons in any one calendar year, per facility.

~~(8) The provisions of paragraph (c)(2) shall not apply to electrocoatings provided the VOC content of coating concentrates do not exceed 450 grams per liter, less water and less exempt compounds, and the usage of coating concentrates is less than 66 gallons per calendar month, per facility, including any VOC-containing materials added to the concentrate, as supplied by the manufacturer, and any VOC-containing materials added to the bath as make-up solvents.~~

(~~9~~7) The provisions of paragraph (c)(2) shall not apply to photoresist operations applying liquid photoresist coating used for photofabrication of metal substrates with a thickness not exceeding 0.060 inches provided the annual usage per facility is 10 gallons or less.

(8) The provisions of subdivision (j) shall not apply to any Super Compliant Material(s). This exemption shall only apply to facilities that demonstrate that total permitted and non-permitted facility VOC emissions do not exceed 4 tons in any calendar year, including emissions from the Super Compliant Material, as demonstrated by annual purchase records.

(g) Rule 442 Applicability

Any coating, coating operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442.

(h) Alternative Emission Control Plan

An owner/operator may achieve compliance with paragraph (c)(2) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(i) Qualification for Classification as Extreme-Performance Coating

~~A coating may be classified as an extreme-performance coating provided that the applicator requests and receives written approval of such classification from the~~

~~Executive Officer, or designee, prior to application of such coating, and shows that the intended use of each coated object would require coating with an extreme-performance coating.~~ ~~The~~Any request to be classified as an Extreme Performance Coating pursuant to subpargraph (b)(19)(E) must include, at a minimum, the following information:

(A) Name, Location and SCAQMD Facility ID;

(B) Material Safety Data Sheet of requested Extreme-Performance ~~c~~Coating;

(C) Volume of requested Extreme Performance Coating used;

(D) Description of process including products and parts coated;

(E) List of equipment utilizing the requested Extreme Performance Coating;

(F) Calculation of emissions from the requested Extreme Performance Coating operation; and

(G) Explanation why an Extreme Performance Coating is necessary.

(j) Recordkeeping

Records of coating and solvent usage shall be maintained pursuant to Rule 109.

(k) Emission Reduction Credits

Facilities that use high-performance architectural, pretreatment, or vacuum-metalizing coatings shall not receive emission reduction credit(s) pursuant to SCAQMD Rule 1309 above those emission reduction credit(s) that the facility would have received if it was operated with coatings having a VOC content of no more than 420 grams per liter, less water and less exempt compounds.