

RULE 2.26
MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

ADOPTED April 27, 1994
REVISED November 9, 1994
REVISED August 13, 1997
REVISED May 14, 2008
REVISED December 10, 2008

INDEX

100 GENERAL

- 101 PURPOSE
- 102 APPLICABILITY
- 103 SEVERABILITY
- 110 EXEMPTION - GENERAL
- 111 EXEMPTION - PROHIBITION OF SALE OR MANUFACTURE
- 112 EXEMPTION - APPLICATION REQUIREMENTS

200 DEFINITIONS

- 201 ADHESION PROMOTER
- 202 AEROSOL COATING PRODUCT
- 203 ANTIGLARE/SAFETY COATING
- 204 ASSEMBLY LINE
- 205 ASSOCIATED PARTS AND COMPONENTS
- 206 AUTOMOTIVE COATING
- 207 AUTOMOTIVE COATING COMPONENT
- 208 AUTOMOTIVE REFINISHING FACILITY
- 209 CATALYST
- 210 CLEAR COATING
- 211 COATING
- 212 COLOR COATING
- 213 CONTROL DEVICE
- 214 COLOR MATCH
- 215 ELECTROSTATIC SPRAY APPLICATION
- 216 EMISSION CONTROL SYSTEM
- 217 EXEMPT COMPOUNDS
- 218 GRAPHIC DESIGN APPLICATION
- 219 GROUP I VEHICLES
- 220 GROUP II VEHICLES AND EQUIPMENT
- 221 HIGH-VOLUME, LOW-PRESSURE (HVLV) SPRAY EQUIPMENT
- 222 LARGE/HEAVY DUTY TRUCKS
- 223 LIGHT AND MEDIUM DUTY TRUCKS AND VANS
- 224 METALLIC/IRIDESCENT TOPCOAT
- 225 MOBILE EQUIPMENT
- 226 MOTOR VEHICLE
- 227 MULTI-COLOR COATING
- 228 MULTI-STAGE TOPCOAT SYSTEM
- 229 PRECOAT
- 230 PRETREATMENT COATING
- 231 PRIMER

232 PRIMER SEALER
233 PRIMER SURFACER
234 REDUCER
235 SINGLE-STAGE COATING
236 SOLVENT
237 SPECIALTY COATINGS
238 SPOT REPAIR
239 SURFACE PREPARATION AND CLEANUP
240 TEMPORARY PROTECTIVE COATING
241 TOPCOAT
242 TRANSFER EFFICIENCY
243 TRUCK BED LINER COATING
244 UNDERBODY COATING
245 UNIFORM FINISH COATING
246 VOLATILE ORGANIC COMPOUNDS(VOC)
247 VOLATILE ORGANIC COMPOUND (VOC) CONTENT

300 STANDARDS

301 COATING LIMITS
302 COATING LIMITS
303 MOST RESTRICTIVE VOC LIMIT
304 APPLICATION REQUIREMENTS
305 EMISSION CONTROL SYSTEM
306 STORAGE AND DISPOSAL - GENERAL
307 REQUIREMENTS FOR SURFACE PREPARATION AND CLEANUP
MATERIALS
308 SPECIALTY COATINGS
309 PRECOAT LIMITATION
310 TOXIC AIR CONTAMINANT

400 ADMINISTRATIVE REQUIREMENTS

401 PROHIBITION OF POSSESSION
402 PROHIBITION OF SPECIFICATION
403 PROHIBITION OF SALE OR MANUFACTURE
404 COMPLIANCE STATEMENT REQUIREMENT
405 LABELING REQUIREMENTS
406 HVLP MARKING
407 OPERATION AND MAINTENANCE PLAN (O&M PLAN)

500 MONITORING AND RECORDS

501 RECORD KEEPING - GENERAL
502 RECORD KEEPING - EMISSION CONTROL SYSTEM
503 RECORD KEEPING - PROHIBITION OF SALE OR MANUFACTURE
504 BURDEN OF PROOF
505 REPORTING

600 TEST METHODS AND CALCULATIONS

- 601 GENERAL
- 602 VOC CONTENT
- 603 EXEMPT COMPOUNDS
- 604 EXEMPT COMPOUNDS -METHYL ACETATE, ACETONE, T-BUTYL
ACETATE, AND PARACHLOROBENZOTRIFLUORIDE (PCBTF)
- 605 CALCULATION OF VOC CONTENT
- 606 CALCULATION OF VOC CONTENT OF COATING SYSTEM
- 607 TRANSFER EFFICIENCY
- 608 HVLP EQUIVALENCY
- 609 CAPTURE EFFICIENCY
- 610 CONTROL EFFICIENCY
- 610 OVERALL CAPTURE AND CONTROL EFFICIENCY
- 612 IRIDESCENT PARTICLES IN METALLIC/IRIDESCENT TOPCOAT
- 613 ACID CONCENTRATION IN PRETREATMENT WASH PRIMER

100 GENERAL

- 101 **PURPOSE:** The purpose of this rule is to limit the emission of volatile organic compounds (VOCs) from coating operations associated with motor vehicles, mobile equipment, and associated parts and components.
- 102 **APPLICABILITY:** The provisions of this rule are applicable to any person who uses, applies or solicits the use or application of any coating on motor vehicles or mobile equipment, and their parts and components, or any person who supplies, sells, offers for sale, manufactures or distributes within the District, any material subject to the provisions of this rule.
- 103 **SEVERABILITY:** If any provision, clause, sentence, paragraph, section or part of this rule for any reason is judged to be unconstitutional or invalid, such judgement shall not affect or invalidate the remainder of the rule.
- 110 **EXEMPTION - GENERAL:** The provisions of this rule, except for Section 503, Burden of Proof, shall not apply to the following:
- 110.1 Application of aerosol coating products.
 - 110.2 Any automotive coating that is sold, supplied, or offered for sale in 0.5 fluid ounce or smaller containers intended to be used by the general public to repair tiny surface imperfections.
 - 110.3 Any coating applied to motor vehicles or mobile equipment, or their associated parts and components during manufacture on an assembly line.
 - 110.4 Any automotive coating that is offered for sale, sold or manufactured for use outside of the District.
- 111 **EXEMPTION - PROHIBITION OF SALE OR MANUFACTURE:** The provisions of Section 403 shall not apply to any automotive coating that is offered for sale, sold or shipped for reformulation or repackaging, or any coating whose emissions to the atmosphere are controlled by an emission control system that meets the requirements of Section 305.
- 112 **EXEMPTION - APPLICATION REQUIREMENTS:** The provisions of Section 304 of this Rule shall not apply to the application of underbody coatings, graphic design applications, truck bed liner coatings, or any coating use of less than one (1) fluid ounce (29.6 milliliters).

200 DEFINITIONS

- 201 **ADHESION PROMOTER:** A coating which is labeled and formulated to be applied to uncoated plastic surfaces to facilitate bonding of subsequent coatings, and on which, a subsequent coating is applied.
- 202 **AEROSOL COATING PRODUCT:** A pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and

is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.

- 203 **ANTI GLARE/SAFETY COATING:** A coating which minimizes light reflection for safety purposes.
- 204 **ASSEMBLY LINE:** An arrangement of industrial equipment and workers in which the product passes from one specialized operation to another until complete, by either automatic or manual means.
- 205 **ASSOCIATED PARTS AND COMPONENTS:** Any structures, devices, pieces, modules, sections, assemblies, subassemblies, or elements of motor vehicles or mobile equipment that are designed to be a part of motor vehicles or mobile equipment but which are not attached to motor vehicles or mobile equipment at the time of coating the structure, device, piece, module, section, assembly, subassembly, or element. "Associated parts and components" does not include circuit boards.
- 206 **AUTOMOTIVE COATING:** Any coating or coating component used or recommended for use in motor vehicle or mobile equipment refinishing, service, maintenance, repair, restoration, or modification, except metal plating activities. Any reference to automotive refinishing or automotive coating made by a person on the container or in product literature constitutes a recommendation for use in motor vehicle or mobile equipment refinishing.
- 207 **AUTOMOTIVE COATING COMPONENT:** Any portion of a coating including, but not limited to, a reducer or thinner, toner, hardener, and additive, which is recommended by any person to distributors or end-users for use in an automotive coating, or which is supplied for or used in an automotive coating. The raw materials used to produce the components are not considered automotive coating components.
- 208 **AUTOMOTIVE REFINISHING FACILITY:** Any shop, business, location, or parcel of land where motor vehicles or mobile equipment or their associated parts and components are coated, including autobody collision repair shops. "Automotive Refinishing Facility" does not include the original equipment manufacturing plant where the motor vehicle or mobile equipment is completely assembled.
- 209 **CATALYST:** A substance whose presence initiates the reaction between chemical compounds.
- 210 **CLEAR COATING:** Any coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating.
- 211 **COATING:** A material which is applied to a surface and forms a film in order to beautify, preserve, repair, or protect such a surface.
- 212 **COLOR COATING:** Any pigmented coating, excluding adhesion promoters, primers, and multi-color coatings, that requires a subsequent clear coating and which is applied over a primer, adhesion promoter, or color coating. Color coatings include metallic/iridescent color coatings.

- 213 **CONTROL DEVICE:** Equipment such as an incinerator or adsorber used to prevent air pollutants from reaching the ambient air.
- 214 **COLOR MATCH:** The ability of a repair coating to blend into an existing coating so that color difference is not visible.
- 215 **ELECTROSTATIC SPRAY APPLICATION:** Any method of spray application of coatings where an electrostatic attraction is created between the part to be coated and the paint particles.
- 216 **EMISSION CONTROL SYSTEM:** A control device and its associated collection system.
- 217 **EXEMPT COMPOUNDS:** As defined in District Rule 1.1, General Provisions and Definitions.
- 218 **GRAPHIC DESIGN APPLICATION:** The application of logos, letters, numbers and graphics to a painted surface, with or without the use of a template by brush, roller, or airbrush.
- 219 **GROUP I VEHICLES:** Passenger cars, large/heavy duty truck cabs and chassis, light and medium duty trucks and vans, and motorcycles.
- 220 **GROUP II VEHICLES AND EQUIPMENT:** Public transit buses and mobile equipment.
- 221 **HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY EQUIPMENT:** Spray equipment permanently labeled as such and which is designed and operated between 0.1 and 10 pounds per square inch (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.
- 222 **LARGE/HEAVY DUTY TRUCKS:** Any truck having a manufacturer's gross vehicle weight rating of over 30,000 pounds.
- 223 **LIGHT AND MEDIUM DUTY TRUCKS AND VANS:** Any truck or van having a manufacturer's gross vehicle weight rating of 30,000 pounds or less.
- 224 **METALLIC/IRIDESCENT TOPCOAT:** Any coating which contains more than 5 g/l (0.042 lb/gal) of metal or iridescent particles, as applied, where such particles are visible in the dried film.
- 225 **MOBILE EQUIPMENT:** Any equipment which may be drawn or is capable of being driven on rails or on a roadway, including, but not limited to, trains, railcars, truck bodies, truck trailers, camper shells, mobile cranes, bulldozers, street cleaners, golf carts and implements of husbandry or agriculture.
- 226 **MOTOR VEHICLE:** Any self-propelled vehicle, including but not limited to, cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers.

- 227 **MULTI-COLOR COATING:** Any coating that exhibits more than one color in the dried film after a single application, is packaged in a single container, and hides surface defects on areas of heavy use, and which is applied over a primer or adhesion promoter.
- 228 **MULTI-STAGE TOPCOAT SYSTEM:** A topcoat system composed of either a basecoat / clearcoat (2 stage), a basecoat / midcoat / clearcoat (3 stage), or a groundcoat / basecoat / midcoat / clearcoat (4 stage).
- 229 **PRECOAT:** Any coating which is applied to bare metal primarily to deactivate the metal surface prior to application of a subsequent water-base primer surfacer. A precoat shall be a coating that dries by oxidation or chemical polymerization.
- 230 **PRETREATMENT COATING:** Any coating which contains a minimum of one half (0.5) percent acid by weight and not more than 16 percent solids by weight necessary to provide surface etching and is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and adhesion.
- 231 **PRIMER:** Any coating, which is labeled and formulated for application to a substrate to provide 1) a bond between the substrate and subsequent coats, 2) corrosion resistance, 3) a smooth substrate surface, or 4) resistance to penetration of subsequent coats, and on which a subsequent coating is applied. Primers may be pigmented.
- 232 **PRIMER SEALER:** Any coating which is labeled and formulated for application prior to the application of a color coating for the purpose of color uniformity, or to promote the ability of the underlying coating to resist penetration by the color coating.
- 233 **PRIMER SURFACER:** Any coating applied prior to the application of a topcoat for the purpose of corrosion resistance, adhesion of the topcoat, and which promotes a uniform surface by filling in surface imperfections.
- 234 **REDUCER:** The solvent used to thin enamel.
- 235 **SINGLE-STAGE COATING:** Any pigmented coating, excluding primers and multi-color coatings, labeled and formulated for application without a subsequent clear coat. Single-stage coatings include single-stage metallic/iridescent coatings.
- 236 **SOLVENT:** A VOC-containing fluid used to perform surface preparation and cleaning operations.
- 237 **SPECIALTY COATINGS:** Unique coatings and compliant coatings with additives which are necessary due to unusual job performance requirements. Said coatings include, but are not limited to, adhesion promoters, uniform finish blenders, elastomeric materials, gloss flatteners, bright metal trim repair, and anti-glare/safety coatings.
- 238 **SPOT REPAIR:** Repair of an area on a motor vehicle, piece of mobile equipment, or associated parts or components of less than 1 square foot (929 square centimeters).

- 239 **SURFACE PREPARATION AND CLEANUP:** The removal of contaminants such as dust, soil, oil, grease, etc., prior to any step in a manufacturing process from parts, products, tools, machinery, equipment, and general work areas.
- 240 **TEMPORARY PROTECTIVE COATING:** Any coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.
- 241 **TOPCOAT:** Any coating applied over a primer, primer system, or an original OEM finish for the purpose of protection or appearance. For the purposes of this Rule, solid color and metallic/iridescent topcoats are single stage applications, the VOC_{AVERAGE} of a multi stage topcoat system will determine compliance with the VOC standards in Section 301 of this Rule.
- 242 **TRANSFER EFFICIENCY:** The ratio of the amount of coating solids adhering to the object being coated to the total amount of coating solids sprayed, expressed as a percentage.
- 243 **TRUCK BED LINER COATING:** Any coating, excluding clear, color, multi-color, and single stage coatings, labeled and formulated for application to a truck bed to protect it from surface abrasion.
- 244 **UNDERBODY COATING:** Any coating labeled and formulated for application to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of the motor vehicle.
- 245 **UNIFORM FINISH COATING:** Any coating labeled and formulated for application to the area around a spot repair for the purpose of blending a repaired area's color or clear coat to match the appearance of an adjacent area's existing coating.
- 246 **VOLATILE ORGANIC COMPOUNDS(VOC):** As defined in Rule 1.1, General Provisions and Definitions.
- 247 **VOLATILE ORGANIC COMPOUND (VOC) CONTENT:** Weight of VOC per volume of material as calculated pursuant to the applicable Sections of 600.

300 STANDARDS

- 301 **COATING LIMITS:** Until July 1, 2009, any person who applies coatings to Group I or II vehicles, mobile equipment, their parts and components, shall comply with Sections 301.1 or 301.2 of this Rule.

301.1 **Group I Vehicles.** A person shall not refinish Group I vehicles, their parts and components, or Group II vehicles and mobile equipment where color match is required, using any coating with a regulatory VOC content in excess of the following limits, expressed as grams of VOC per liter (or pounds per gallon) of coating applied, excluding water and exempt compounds

COATING	REGULATORY VOC CONTENT
Pretreatment Coating	780 g/l (6.5 lbs/gal)
Precoat	600 g/l (5.0 lbs/gal)
Primer/Primer surfacer	250 g/l (2.1 lbs/gal)
Primer Sealer	420 g/l (3.5 lbs/gal)
Solid Color Topcoat	420 g/l (3.5 lbs/gal)
Metallic/Iridescent Topcoat	520 g/l (4.3 lbs/gal)
Multi Stage Topcoat System	540 g/l (4.5 lbs/gal)
Specialty Coating	840 g/l (7.0 lbs/gal)
Temporary Protective Coating	60 g/l (0.5 lbs/gal)

301.2 **Group II Vehicles and Mobile Equipment.** A person shall not finish or refinish Group II vehicles and equipment or their parts and components where color match is not required, using any coating with a regulatory VOC content in excess of the following limits, expressed as grams of VOC per liter (or pounds per gallon) of coating applied, excluding water and exempt compounds.

COATING	REGULATORY VOC CONTENT
Pretreatment Coating	780 g/l (6.5 lbs/gal)
Precoat	600 g/l (5.0 lbs/gal)
Primer	250 g/l (2.1 lbs/gal)
Primer Sealer	340 g/l (2.8 lbs/gal)
Topcoat	420 g/l (3.5 lbs/gal)
Metallic/Iridescent Topcoat	420 g/l (3.5 lbs/gal)
Specialty Coating	840 g/l (7.0 lbs/gal)
Temporary Protective Coating	60 g/l (0.5 lbs/gal)

- 302 **COATING LIMITS:** Effective July 1, 2009, no person shall apply to any motor vehicle, mobile equipment, or associated parts and components, any coating with a VOC regulatory content, as calculated pursuant to section 605, in excess of the following limits, except as provided in Section 305:

COATING CATEGORY	REGULATORY VOC CONTENT grams/liter (pounds/gallon)	
	Effective 7/1/2009	Effective 7/1/2010
Adhesion Promoter	840 (7.0)	540 (4.5)
Clear Coating	250 (2.1)	250 (2.1)
Color Coating	420 (3.5)	420 (3.5)
Multi-Color Coating	680 (5.7)	680 (5.7)
Pretreatment Coating	660 (5.5)	660 (5.5)
Primer	250 (2.1)	250 (2.1)
Primer Sealer	340 (2.8)	250 (2.1)
Single-Stage Coating	420 (3.5)	340 (2.8)
Temporary Protective Coating	60 (0.5)	60 (0.5)
Truck Bed Liner Coating	310 (2.6)	310 (2.6)
Underbody Coating	430 (3.6)	430 (3.6)
Uniform Finish Coating	540 (4.5)	540 (4.5)
Any Other Coating Type	250 (2.1)	250 (2.1)

- 303 **MOST RESTRICTIVE VOC LIMIT:** If anywhere on the container of any automotive coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a person, any representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in section 302, then the lowest VOC content limit shall apply.
- 304 **APPLICATION REQUIREMENTS:** No person shall apply any coating to any motor vehicle, mobile equipment, or associated parts and components unless one of the following application methods is used:
- 304.1 Brush, dip, or roller;
 - 304.2 Electrostatic spray;
 - 304.3 HVLP spray equipment;
 - 304.4 Use of a spray gun: If a spray gun is used, the end user must demonstrate that the gun meets the HVLP definition in Section 221 in design and use. A satisfactory demonstration must be based on the manufacturer's published technical material on the design of the gun and by a demonstration of the operation of the gun using an air pressure tip gauge from the manufacturer of the gun.

- 304.5 Any alternative method that achieves a transfer efficiency equivalent to, or higher than, the application methods listed in sections 304.1, 304.2 or 304.3 as determined per section 608. Written approval from the Executive Officer or Air Pollution Control Officer of the District shall be obtained for each alternative method prior to use.
- 305 **EMISSION CONTROL SYSTEM:** In lieu of complying with the VOC content limits of Section 301 or 302, a person may use a VOC emission control system that controls emissions from the source operation provided the following conditions are met:
- 305.1 The VOC emission control system shall be approved in writing by the APCO,
- 305.2 The VOC emission control system shall be operated with an overall capture and control efficiency of at least 85 percent by weight during periods of emission producing activity.
- 306 **STORAGE AND DISPOSAL - GENERAL:** All VOC-containing materials, whether in its form for intended use or as a waste or used product, including items such as cloth or paper laden with VOC containing materials, shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times, except when filling or emptying, and disposed of in a manner to prevent evaporation of VOCs into the atmosphere at the facility.
- 307 **REQUIREMENTS FOR SURFACE PREPARATION AND CLEANUP MATERIALS:** Any solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in surface preparation and cleanup operations shall be carried out pursuant to Rule 2.31, Surface Preparation and Cleanup.
- 308 **SPECIALTY COATINGS:** Until July 1, 2009, use of all specialty coatings except antiglare/safety coatings shall not exceed 5.0 percent of all coatings applied, on a monthly basis. The application of topcoats with a specialty coating used as an additive shall be subject to the topcoat limits in Sections 301.1 and 301.2 of this Rule.
- 309 **PRECOAT LIMITATION:** Until July 1, 2009, a person shall not use precoat in excess of 25 %, by volume, of the amount of primer surfacer used on a monthly basis. Purchase invoices to verify this limitation shall be presented to the Air Pollution Control Officer upon request.
- 310 **TOXIC AIR CONTAMINANT:** No person shall apply a coating to any motor vehicle, mobile equipment, or associated parts and components, containing cadmium or hexavalent chromium.

400 ADMINISTRATIVE REQUIREMENTS

- 401 **PROHIBITION OF POSSESSION:** Effective 7/1/2009, no person shall possess at any automotive refinishing facility, any automotive coating that is not in compliance with section 302 or 305, as applicable.

- 402 **PROHIBITION OF SPECIFICATION:** No person shall specify the use of any coating to be applied to a motor vehicle, mobile equipment, or part or component subject to the provisions of this rule that does not meet the limits and requirements of this rule where such applications result in a violation of this rule. The requirements of this Section shall apply to all written or oral contracts, including, but not limited to, job orders, under the terms of which any coating or solvent that is subject to the provisions of this rule is to be used or applied.
- 403 **PROHIBITION OF SALE OR MANUFACTURE:** No person shall manufacture, blend, repackage for sale, supply, sell, offer for sale or distribute within the District any coating if such product is prohibited by any of the provisions of this Rule.
- 404 **COMPLIANCE STATEMENT REQUIREMENT:** The manufacturer or repacker of coatings subject to this Rule shall provide the following:
- 404.1 Until July 1, 2009, separate data sheets designating the VOC content (as supplied) including any recommended thinning ratio. The VOC content shall be expressed as grams per liter of coating less water and less exempt compounds and may be determined by either calculation or analysis.
- 404.2 Effective July 1, 2009, product data sheets or an equivalent medium containing the following information:
- a. The actual VOC content and the regulatory VOC content for coatings expressed in grams per liter;
 - b. The weight percentage of volatiles, water, and exempt compounds;
 - c. The volume percentage of water and exempt compounds; and
 - d. The density of the material in grams per liter.
- 405 **LABELING REQUIREMENTS:** Effective July 1, 2009, the manufacturer and repacker of automotive coatings or automotive coating components shall include on all containers the applicable use category(ies), and the VOC actual for coatings and VOC regulatory for coatings, as supplied, expressed in grams per liter.
- 406 **HVLP MARKING:** A person shall not sell, offer for sale, or distribute for use within the District any HVLP gun without a permanent marking, or accurate information provided on company letterhead or in the form of technical literature clearly identifying the spray gun manufacturer, salesperson or distributor, denoting the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in Section 221 of this Rule.
- 407 **OPERATION AND MAINTENANCE PLAN (O&M Plan):** Any person using an emission control device pursuant to Section 305 of this Rule, as a means of complying with this rule, must submit with the application for Authority to Construct, pursuant to Rule 3.1, GENERAL PERMIT REQUIREMENTS, an O&M Plan for the emission control device to the APCO for approval. The O&M Plan shall specify operation and maintenance procedures which will demonstrate continuous operation of the control device during periods of emission producing operations. The O&M Plan shall also specify which records must be kept to document these operation and maintenance procedures. These records shall comply with the requirements of Sections 501 and 502 of this Rule. Any person using an emission control device must

fully comply with all O&M Plans submitted for approval, even if such O&M Plans have not yet been approved, unless notified in writing by the APCO.

500 MONITORING AND RECORDS

501 **RECORD KEEPING - GENERAL:** Any person using coatings subject to Section 300 of this Rule shall maintain and have available at all time on site the following:

501.1 A current list of all coatings and additives used subject to this rule, including the following:

- a. Material name and manufacturer;
- b. Application method;
- c. Coating category and mix ratio specific to the coating; and
- d. Actual VOC content for coatings and the regulatory VOC content for coatings, as applied.

501.2 Current manufacturer specification sheets, material data sheets, technical data sheets, or air quality data sheets, which list the actual VOC content for coatings and regulatory VOC content for coatings of each ready-to-spray coating (based on the manufacturer's stated mix ratio) and automotive coating components, and the VOC content of each solvent.

501.3 The person shall maintain records on a daily basis including the following information:

- a. Coating and mix ratio of components in the coating used.
- b. Quantity of each coating applied.

501.4 Purchase records identifying the coating type, name, and volume of coating.

502 **RECORD KEEPING - EMISSION CONTROL SYSTEMS:** If compliance with this rule is achieved through the use of an emission control system, in addition to the provisions of Section 501, the owner or operator shall maintain:

502.1 Daily usage records of all materials used such as coatings, catalysts, additives, and reducers.

502.2 Daily records of key operating parameters such as temperatures, pressures, flowrates, and hours of operation of the control device to verify compliance of the capture and control device.

502.3 Maintenance work which interferes with the operation of the control device.

503 **RECORD KEEPING - PROHIBITION OF SALE OR MANUFACTURE:** Any person claiming an exemption under Section 111 shall keep a detailed log of each automotive coating component and automotive coating manufactured, blended, repackaged for sale, supplied, sold, offered for sale, or distributed showing:

503.1 The quantity manufactured, blended, repackaged for sale, supplied, sold, offered for sale, or distributed, including size and number of containers;

503.2 The regulatory VOC content for coatings;

- 503.3 The actual VOC content for coatings;
- 503.4 To whom they were supplied, sold, offered for sale, or distributed, or for whom they were manufactured, blended, or repackaged for sale including the name, address, phone number, retail tax license number, and valid District permit number; and
- 503.5 The specific exemption being utilized under Section 111.
- 504 **BURDEN OF PROOF:** Any person claiming an exemption pursuant to Section 110 or 111 shall have information available such as product data or material safety data sheets or records that would allow the APCO to verify the eligibility of the exemption.
- 505 **REPORTING:** All records required by this Rule shall be maintained on site for a period of two years and made available to the APCO upon request.

600 TEST METHODS AND CALCULATIONS

- 601 **GENERAL:** For the purposes of this Rule, the following test methods or calculation methods shall be used. Other test methods determined to be equivalent and approved in writing by the District and the EPA may also be used. VOC emissions or other parameters determined to exceed any limits established by this Rule through the use of any of the following test methods or calculations shall constitute a violation of this Rule.
- 602 **VOC CONTENT:** The VOC content of coatings, subject to the provisions of this Rule, shall be determined by procedures contained in EPA Reference Test Method 24 (40 CFR 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings").
- 603 **EXEMPT COMPOUNDS:** Measurement of exempt compounds shall be determined by using ARB Method 432, "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings," September 12, 1998; ARB Method 422 "Determination of Volatile Organic Compounds in Emission from Stationary Sources," January 22, 1987; or South Coast Air Quality Management District (SCAQMD) Method 303-91 "Determination of Exempt Compounds," February 1993.
- 604 **EXEMPT COMPOUNDS -METHYL ACETATE, ACETONE, T-BUTYL ACETATE, AND PARACHLOROBENZOTRIFLUORIDE (PCBTF):** Measurement of methyl acetate, acetone t-butyl acetate and PCBTF, shall be determined by using ASTM D6133-02, "Standard Test Method for Acetone, p-Chlorobenzotrifluoride, Methyl Acetate or t-Butyl Acetate Content of Solventborne and Waterborne Paints, Coatings, Resins, and Raw Materials by Direct Injection Into a Gas Chromatograph".

605 **CALCULATION OF VOC CONTENT:** The VOC content per volume of coating shall be calculated as follows:

605.1 The regulatory VOC content per volume of coating shall be calculated less water and less exempt compounds as follows:

$$\text{VOC}_{\text{con}} = \frac{W_s - W_w - W_{\text{ec}}}{V_m - V_w - V_{\text{ec}}}$$

Where:

- VOC_{con} = Grams of VOC per liter of material
- W_s = Weight of volatile compounds in grams
- W_w = Weight of water in grams
- W_{ec} = Weight of exempt compounds in grams
- V_m = Volume of coating materials in liters
- V_w = Volume of water in liters
- V_{ec} = Volume of exempt compounds in liters

605.2 The actual VOC content per volume of coating shall be calculated by the following equation:

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

Where:

- VOC_{con} = Grams of VOC per liter of material
- W_s = Weight of volatile compounds in grams
- W_w = Weight of water in grams
- W_{ec} = Weight of exempt compounds in grams
- V_m = Volume of material in liters

606 **CALCULATION OF VOC CONTENT OF COATING SYSTEM:** Until July 1, 2009, the VOC content of a basecoat/clearcoat coating system shall be calculated according to the following formula:

$$\text{VOC}_{\text{AVERAGE}} = \frac{\text{VOC}_{\text{BC}} + 2\text{VOC}_{\text{CC}}}{3}$$

The VOC content of a three stage coating system shall be calculated according to the following formula:

$$\text{VOC}_{\text{AVERAGE}} = \frac{\text{VOC}_{\text{BC}} + \text{VOC}_{\text{MC}} + 2\text{VOC}_{\text{CC}}}{4}$$

The VOC content of a four stage coating system shall be calculated according to the following formula:

$$\text{VOC}_{\text{AVERAGE}} = \frac{\text{VOC}_{\text{GC}} + \text{VOC}_{\text{BC}} + \text{VOC}_{\text{MC}} + 2\text{VOC}_{\text{CC}}}{5}$$

Where:

VOC_{AVERAGE}	=	The average of the VOC content, as applied, and used to determine compliance with the standards in Section 301 of this Rule.
VOC_{GC}	=	The VOC content, as applied, of a pigmented groundcoat or tinted primer sealer.
VOC_{BC}	=	The VOC content, as applied, of a pigmented basecoat.
VOC_{MC}	=	The VOC content, as applied, of a translucent midcoat.
$2VOC_{\text{CC}}$	=	The VOC content, as applied, of a transparent clearcoat.

607 **TRANSFER EFFICIENCY:** Transfer efficiency as required by Section 303 of this Rule shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989.

608 **HVLP EQUIVALENCY:** Spray equipment HVLP equivalency shall be determined by using South Coast Air Quality Management District "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns" September 26, 2002.

609 **CAPTURE EFFICIENCY:** The capture efficiency of a VOC emission control system's collection device shall be determined according to EPA's "Guidelines for Determining Capture Efficiency," January 9, 1995 and 40 CFR 51, Appendix M, Methods 204-204F, as applicable.

610 **CONTROL EFFICIENCY:** The control efficiency of a VOC emission control system's collection device shall be determined by using EPA Methods 2, 2A, or 2D for measuring flow rates and EPA Method 25, 25A, or 25B for measuring total gaseous organic concentrations at the inlet and outlet of the control device. EPA Method 18 or CARB Method 422 shall be used to determine the emissions of exempt compounds.

611 **OVERALL CAPTURE AND CONTROL EFFICIENCY:** For VOC emission control systems that consist of a single VOC emission control device, the overall capture and control efficiency shall be calculated by using the following equation:

$$CE_{\text{overall}} = [CE_{\text{capture}} \times CE_{\text{control}}] / 100\%$$

Where: CE_{overall} = Overall Capture and Control Efficiency
 CE_{capture} = Capture Efficiency of the collection device*
 CE_{control} = Control Efficiency of the collection device**

*As determined in Section 609

**As determined in Section 610

612 **IRIDESCENT PARTICLES IN METALLIC/IRIDESCENT TOPCOAT:** Iridescent particles in metallic/iridescent topcoat as defined, in Section 224 of this Rule shall be determined by the SCAQMD Method 318 "Determination of Weight Percent Elemental Metal in Coatings by x-Ray Diffraction."

613 **ACID CONCENTRATION IN PRETREATMENT WASH PRIMER:** Acid concentration in pretreatment coating as defined in Section 230 of this Rule shall be determined by using ASTM D1613-06 “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products”.