

RULE 410.4A Motor Vehicle and Mobile Equipment Refinishing Operations - Adopted 5/6/91, Amended 4/6/95, 3/7/96, 3/13/14

I. Purpose

The purpose of this rule is to limit volatile organic compound (VOC) emissions from coatings and solvents used in production, repair, refinish, or maintenance operations where motor vehicles, mobile equipment, or associated parts and components are coated.

II. Applicability

The provisions of this Rule are enforceable upon amendment date and shall apply to any person who supplies, sells, offers for sale, manufactures, distributes, uses, applies, or solicits the use or application of any automotive coating or associated solvent within the District.

III. Severability

Each provision of this rule shall be deemed severable, and in the event that any provision of this rule is held to be invalid, the remainder of this rule shall continue in full force and effect.

IV. Definitions

- A. 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.
- B. 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.
- C. APCO: Air Pollution Control Officer of the Eastern Kern Air Pollution Control District.
- D. 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.
- E. Associated Parts and Components: 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.

- F. 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.
- G. 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.
- H. 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.
- I. California Air Resources Board (CARB or ARB): Air Resources Board of the California Environmental Protection Agency.
- J. Cleaning Operations: The removal of loosely held uncured adhesives, inks, coatings, or contaminants, including, but not limited to, dirt, soil, or grease, from motor vehicles, mobile equipment, associated parts and components, substrates, parts, products, tools, machinery, equipment, or general work areas.
- K. Clear Coating: Any coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating.
- L. Coating: A material which is applied to a surface and forms a film in order to beautify, preserve, repair, or protect such a surface.
- M. 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.
- N. Electrodeposition: Applying an electrically-charged dip coating onto object to be coated.
- O. 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.
- P. Emission Control System: Any combination of capture systems and control devices used to reduce VOC emissions from automotive coating operations.
- Q. EPA: The United States Environmental Protection Agency.

- R. Exempt Compounds: As defined in District Rule 102, Definitions, “Exempt Compounds”.
- S. Graphic Arts Operation: Application of logos, letters, numbers or graphics to a painted surface with or without use of a template.
- T. High-Volume, Low-Pressure (HVLP): Spray equipment permanently labeled as such and which is designed and operated between 0.1 and 10 pounds per square inch, gauge, (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns and with liquid supply pressure less than 50 psig.
- U. Metallic/Iridescent Topcoat: Coating as applied containing more than 5 g/1 (0.042 lb/gal) of visible metal or iridescent particles, where such particles are visible in the dried film.
- V. Mobile Equipment: Equipment drawn or capable of being driven on a roadway, including, but not limited to a: truck body, truck trailer, utility body, camper shell, mobile crane, bulldozer, construction and farm heavy equipment, concrete mixers, street cleaner, golf cart, all terrain vehicles, implements of husbandry, military tank or other tracked military vehicle and hauling equipment used inside and around airports, depots, and industrial and commercial plants.
- W. Motor Vehicle: As defined in Rule 102, Definitions.
- X. 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.
- Y. Precoat: Coating applied to bare metal primarily to deactivate metal surface for corrosion resistance and adhesion.
- Z. Pretreatment Coating: Coating containing a minimum of 0.5% 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.
- AA. 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.
- BB. Refinish: Coating of vehicles, their parts and components, or mobile equipment, including partial body collision repairs, for the purpose of protection or beautification and subsequent to the original coating applied at an Original Equipment Manufacturing (OEM) plant coating assembly line.
- CC. 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.

- DD. Solvent: As defined in Rule 410.3, Organic Solvent Degreasing Operations.
- EE. Spray Booth: Any power ventilated structure of varying dimensions and construction provided to enclose or accommodate a spraying operation and which meets the Uniform Fire Code. A spray booth shall confine and limit, by dry or wet filtration, the escape to the atmosphere of overspray particulate matter, exhaust through filters or other air pollution control device approved by the APCO and provide adequate ventilation, air velocity, and safety features, as required by the Uniform Fire Code.
- FF. Specialty Coating: Coating necessary for unusual job performance requirements, including, but not limited to, adhesion promoters, uniform finish blenders elastomeric materials, gloss flatteners, bright metal trim repair, anti-glare/safety coatings, and cut in or jambing clear coatings.
- GG. Spot/Panel Repair: Non-assembly line process of repairing and restoring a portion of a motor vehicle, or associated parts or components of less than 1 square foot (929 square centimeters).
- HH. Surface Preparation: The use of VOC containing solvents applied with cloth, sponge, or other medium for the purpose of removing dust, grease, and other contaminants from a surface just prior to application of a coating.
- II. Temporary Protective Coating: Any coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.
- JJ. Topcoat: Coating applied over a primer or an original equipment manufacturer finish for the purpose of protection or appearance.
- KK. Touch-Up Coating: A coating used to cover minor coating imperfections appearing after the main coating operation.
- LL. Transfer Efficiency: The amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed, expressed as a percentage.
- MM. 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.
- NN. 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.
- OO. 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.
- PP. Utility Body: Special purpose service compartment or unit to be bolted, welded, or affixed onto an existing cab and chassis. Such compartment may serve as storage for equipment or parts.

QQ. Volatile Organic Compound (VOC): Any compound containing at least one atom of carbon, excluding Exempt Compounds as listed in Rule 102 Definitions.

RR. VOC Content:

1. VOC regulatory for Coatings: VOC in grams per liter of coating, excluding water and exempt compounds, and shall be calculated by the following equation:

$$\text{VOC regulatory content} = \frac{W_v - W_w - W_{ec}}{V_m - V_w - V_{ec}}$$

2. VOC actual for Coatings: VOC in grams per liter of material shall be calculated using the following equation:

$$\text{VOC actual content} = \frac{W_v - W_w - W_{ec}}{V_m}$$

3. VOC content for Solvents: VOC in grams per liter of material shall be calculated by the following equation:

$$\text{VOC content} = \frac{W_v - W_w - W_{ec}}{V_m}$$

Where:

VOC content = amount of volatile organic compounds in grams/liter

W_v = weight of volatiles in grams

W_w = weight of water in grams

W_{ec} = weight of exempt compounds in grams

V_m = volume of material (coating or solvent, as applicable) in liters

V_w = volume of water in liters

V_{ec} = volume of exempt compounds in liters

V. Exemptions

A. Requirements of this Rule shall not apply to the following operations:

1. Graphic Arts Operations as defined in Section IV.S.
2. Any automotive coating or associated solvent that is offered for sale, sold, or supplied in 0.5 fluid ounce or smaller containers intended to be used by the general public to repair tiny surface imperfections.
3. Coating operations employing hand-held non-refillable aerosol cans, 18 oz. or less, provided the area to be covered does not exceed nine square feet per vehicle to repair minor surface damage and imperfections.
4. Any automotive coating or associated solvent that is offered for sale, sold, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.

5. Any coating applied to motor vehicles or mobile equipment, or their associated parts and components, during manufacture on an assembly line.
- B. Requirements of Section VI.D (Spray Booth) shall not apply to:
1. Touch-up coating operations as defined in Section IV.KK, not exceeding nine square feet per vehicle.
 2. Coating of motor vehicle engine compartments, engine components, and suspension components, provided such components are replaced in the vehicle.
 3. Application of primers, primer surfacers and precoats not exceeding nine square feet per vehicle, provided VOC content does not exceed 250 g/l and coatings contain no lead or chromium compounds.
 4. Application of coatings to a vehicle, due to shape or size, not reasonably contained in a spray booth. To qualify for this exemption a person shall comply with the following requirements:
 - a. Submit a written request on a case by case basis to the APCO describing vehicle(s) to be coated, size of spray booth, physical size of vehicle(s) (length, width, and height), number of vehicle(s) to be coated, time required to paint vehicle(s), estimated volume of coating(s) to be used, date when vehicle(s) or mobile equipment is to be coated, and VOC content of each coating used;
 - b. Such request shall be submitted ten calendar days prior to surface coating a motor vehicle or mobile equipment outside a spray booth. The APCO shall provide a written determination to the requester within five calendar days of proposed surface coating of the motor vehicle or mobile equipment; and
 - c. The APCO may grant written approval for a specified time period, not to exceed one year.
- C. Coating operations and/or facilities exempt from this Rule shall comply with all other applicable District prohibitory Rules.
- D. Provisions of Sections VI.C. through VI.G. and Section VII. shall not apply to coating of one vehicle per twelve month period, by the registered owner of the vehicle being painted, provided the surface coating does not contain lead or chromium compounds.
- E. Section VI.F, Surface Preparation and Equipment Cleanup Requirements, shall not apply to the use of surface preparation solvents to clean plastic parts just prior to coating or VOC-containing materials for the removal of wax and grease provided that nonaerosol, hand-held spray bottles are used with a maximum solvent VOC content of 780 g/l and the total volume of the solvent does not exceed 20 gallons per year per facility. Records of solvent usage shall be kept in accordance with Section VII.C.4 of this Rule.

VI. Requirements

- A. VOC Content Limits: No person shall apply a coating to any motor vehicle, mobile equipment, or its associated parts and components, with a VOC regulatory content, as calculated pursuant to Section IV.RR.1, in excess of the limits expressed in Table of Standards, except as provided in Sections VI.C and VI.J.

**TABLE OF STANDARDS
VOC CONTENT LIMITS FOR MOTOR VEHICLE COATINGS
Content expressed in Grams per Liter (Pounds per Gallon)
Less Water and Exempt Compounds**

Coating Category	VOC Limit
Adhesion Promoter	540 (4.5)
Cavity Wax	650 (5.4)
Clear Coating	250 (2.1)
Color Coating	420 (3.5)
Deadener	650 (5.4)
Gasket/Gasket Sealing Material	200 (1.7)
Lubricating Wax/Compound	700 (5.8)
Multi-Color Coating	680 (5.7)
Pretreatment Coating	660 (5.5)
Primer	250 (2.1)
Sealer	650 (5.4)
Single-Stage Coating	340 (2.8)
Specialty Coating	540 (4.5)
Temporary Protective Coating	60 (0.5)
Truck Bed Liner Coating	200 (1.7)
Trunk Interior Coating	650 (5.4)
Underbody Coating	650 (5.4)
Uniform Finish Coating	540 (4.5)
Any other coating type	250 (2.1)

- B. 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 Table of Standards, then the lowest VOC content limit shall apply.

- C. Alternate Emission Control: In lieu of complying with VOC content limits specified in Table of Standards, an emission control system with a capture efficiency of at least 90% and a control efficiency of at least 90% may be used if it has been approved in writing by the Air Pollution Control Officer (APCO). Any approved emission control system must be maintained and used in proper working condition at all times. Use of a VOC emission control system shall not result in emissions in excess of those that would have been emitted had the operator complied with the provisions of Section V.A.
- D. Spray Booth: All surface coatings subject to this Rule shall be applied within a permitted, properly maintained, and operational paint spray booth located at a site with proper city or county zoning.
- E. Coating Application Methods: 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:
1. Brush, dip, flow, or roll coating conducted in accordance with manufacturer's recommendations.
 2. Electrostatic or electrodeposition application conducted in accordance with manufacturer's recommendations.
 3. HVLP spray equipment operated in accordance with manufacturer's recommendations.
 4. Spray gun: If a spray gun is used, the end user must demonstrate that the gun meets the HVLP definition in Section IV.T 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.
 5. Any alternative coating application method which has been demonstrated to achieve at least 65% transfer efficiency or the equivalent efficiency of an HVLP and approved, in writing, by APCO.

Section VI.E does not apply to underbody coatings, graphic arts operations, truck bed liner coatings, or any coating use of less than one (1) fluid ounce (29.6 milliliters).

- F. Surface Preparation and Equipment Cleanup Requirements: No person shall conduct surface preparation or equipment cleanup for activities subject to provisions of this Rule unless the following VOC limits are met and methods are used:
1. VOC content of surface preparation solvent shall not exceed 25 g/l (0.2 lb/gal), as calculated pursuant to Section IV.RR.3, unless Section V.E applies.
 2. Coatings Application Equipment Cleaning: Solvents used for cleaning of coatings application equipment shall comply with both limits specified below:

- a. Solvent shall have a VOC content of 950 grams or less per liter (7.9 lb/gal) of material; and
 - b. Solvent shall have a VOC composite partial pressure of 35 mm Hg or less at 20°C (68°F).
3. Cleaning Devices and Methods Requirements: No person shall perform solvent cleaning operations unless one of the following cleaning devices or methods is used:
- a. Wipe cleaning;
 - b. Spray bottles or containers with a maximum capacity of 16 fluid ounces from which solvents are applied without a propellant-induced force;
 - c. Cleaning equipment having a closed solvent container during cleaning operations, except when depositing and removing objects to be cleaned, and closed during nonoperation except during maintenance and repair of the cleaning equipment itself;
 - d. Remote reservoir cold cleaner operated in conformance with District Rule 410.3, Organic Solvent Degreasing Operations;
 - e. System totally enclosing spray guns, cups, nozzles, bowls, and other parts during washing, rinsing, and draining procedures;
 - f. Non-atomized solvent flow method collecting cleaning solvent in a container or a collection system closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
 - g. Solvent flushing method discharging cleaning solvent into a container closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. Discharged solvent from such equipment shall be collected into containers without atomizing into open air. Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.
- G. Storage and Disposal: Regardless of VOC content, all automotive coating components, automotive coatings, and solvents, shall be stored in non-absorbent, vapor-tight containers kept closed at all times except when filling or emptying.
- H. 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 with a VOC content in excess of the limits specified in Section VI.A.

Notwithstanding the provisions of this section, a person may manufacture, blend, repackage for sale, supply, sell, offer for sale, or distribute a coating with a VOC content in excess of the limits specified in section VI.A under the following circumstances and provided all of the requirements of section VII.C.6 are also met:

1. The coating is used exclusively within an emission control system as allowed in Section VI.C, or
 2. Coating is exempt under one or more of the provisions of Section V.A.
- I. Prohibition of Specification: No person shall solicit or require the use of, or specify the application or use of any coating or solvent on a motor vehicle or mobile equipment, or its associated parts and components, if such use or application results in a violation of this Rule. This prohibition shall apply to all written or oral contracts, including but not limited to, job orders, under the terms of which any coating or solvent subject to provisions of this Rule is to be applied. This prohibition shall not apply to coatings or solvents that meet the criteria specified in Section VI.H.
 - J. Sell-Through/Existing Stock of Coatings: A coating manufactured prior to amendment date of this rule, that complied with the VOC Content limit(s) in effect at that time, may be sold, supplied, or offered for sale for 12 months after rule adoption date. Such a coating may be applied at any time, both before and after adoption date, provided manufacture Date-Code and VOC Content is clearly printed on coating container.

VII. Administrative Requirements

A. Compliance Statement Requirement

1. For each individual automotive coating or automotive coating component, the manufacturer and repackager shall include the following information on product data sheets, or an equivalent medium:
 - a. The VOC actual for coatings and VOC regulatory 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).
2. For each individual ready to spray mixture (based on the manufacturer's and repackager's stated mix ratio), the manufacturer and repackager shall include the following information on product data sheets, or an equivalent medium:
 - a. The VOC actual for coatings and VOC regulatory 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).
3. The manufacturer and repackager of solvents subject to this rule shall include the VOC content as supplied, calculated pursuant to section IV.RR.3, expressed in grams per liter, on product data sheets, or an equivalent medium.

B. Labeling Requirements

1. The manufacturer and repackager 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.
2. The manufacturer and repackager of solvents subject to this rule shall include on all containers the VOC content for solvents, as supplied, expressed in grams per liter.

C. Record Keeping Requirements

Any person who uses coatings or solvents, subject to this rule, shall maintain and have the following available on site at all times:

1. A current list of all VOC containing products in use that includes any data necessary to evaluate compliance, including but not limited to, the following information as applicable:
 - a. Material name and manufacturer's identification;
 - b. Application method;
 - c. Material type (coating as listed in Table of Standards) and specific use instructions;
 - d. Specific mixing instructions;
 - e. VOC actual and VOC regulatory for coatings, as applied, or VOC content for solvent.
2. Daily coating and solvent use records, including the following information for each:
 - a. Volume of each coating/solvent mix ratio;
 - b. VOC content in grams/liter (or pounds/gallon) as applied/used;
 - c. Volume of each coating/solvent in liters (or gallons) applied/used;
 - d. Type and amount of solvent used for cleanup and surface preparation.

If purchase records are used to determine the amount of solvents used, then records and manifests of the amounts of solvents disposed of or sent to a recycler must also be maintained and made available to the APCO upon request.

3. Current manufacturer specification sheets, material safety data sheets, technical data sheets, or air quality data sheets, which list the VOC actual for coatings and VOC regulatory for coatings of each ready-to-spray coating (based on the manufacturer's stated mix ratio), and VOC content of each solvent.
4. Purchase records identifying the coating type (as listed in Table of Standards), name, and volume of coatings and solvents.
5. Alternate Emissions Control Records: Any person using an emission control system shall maintain daily records of key system operating parameters which will demonstrate continuous operation and compliance of the emission control system

during periods of VOC emission producing activities. “Key system operating parameters” are those parameters necessary to ensure or document compliance with Section VI.C., including, but not limited to, temperatures, pressure drops, and air flow rates.

6. Record Keeping Requirements for Prohibition of Sale: Any person claiming an exception specified in Section VI.H 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:
 - a. The quantity manufactured, blended, repackaged for sale, supplied, sold, offered for sale, or distributed, including size and number of containers;
 - b. The VOC regulatory for coatings;
 - c. The VOC actual for coatings;
 - d. 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; and
 - e. The specific exception being utilized under Section VI.C.

7. Record Retention: Records required by this Rule shall be retained for a minimum of three years and made available to the APCO upon request.

VIII. Test Methods

The following test methods are incorporated by reference herein, and shall be used to test emission sources subject to the provisions of this rule. A source is in violation of this rule if any measurement by any of the listed applicable test methods exceeds any standard of this rule.

- A. Acid Content: Measure of acid content shall be determined by using ASTM D1613-03 “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products” (October 2003).

- B. Analysis of Samples: Samples of VOC as specified in this Rule shall be analyzed by EPA Method 24 as set forth in Appendix A of Title 40 of the Code of Federal Regulations (40 CFR) Part 60, “Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings”. Analysis of halogenated exempt compounds shall be conducted using CARB Method 422, “Determination of Volatile Organic Compounds in Emissions from Stationary Sources” (September 12, 1990).

- C. Alternative Test Methods: The use of other test methods which are determined to be equivalent or better and approved, in writing, by the APCO, ARB, and EPA may be used in place of the test methods specified in this rule.

- D. Control and Capture Efficiency: Capture and control efficiency of emission control systems shall be determined as specified in EPA’s “Guidelines for Determining Capture Efficiency,” (January 9, 1995) and 40 CFR 51, Appendix M, Methods 204-204f as

applicable. Total organic emissions of emission control systems shall be determined using EPA Method 25, 25A or 25B.

- E. Determination of Emissions: Emissions of VOC shall be measured by EPA Method 25, 25A, or 25B, as applicable and analysis of halogenated exempt compounds shall be conducted using CARB Method 432, "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings" (September 12, 1998).
- F. Exempt Organic Compound Content of Coatings: The exempt organic compound content of coatings or solvents shall be determined using ASTM Method D 6133- 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 Chromatograph. Exempt organic compound content, other than as determined above, shall be determined by using CARB Method 422, CARB Method 432, or South Coast AQMD Method 303-91, "Determination of Exempt Compounds" (February 1993).
- G. HVLP Equivalency: Spray Equipment HVLP equivalency shall be determined by using South Coast Air Quality Management District's "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns" (September 26, 2002).
- H. Metallic Content: The metallic content of a coating shall be determined by South Coast Air Quality Management District Test Method 318-95, " Determination of Weight Percent Elemental Metal in Coatings by X-ray" (July 1996).
- I. Transfer Efficiency: Spray equipment transfer efficiency shall be determined by using South Coast Air Quality Management District Method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User", (May 24, 1989).
- J. VOC Composite Partial Pressures: VOC composite partial pressures shall be determined using either manufacturer's information regarding formulation or using ASTM Methods E169-04, Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis or E260-96, Standard Practice for Packed Column Gas Chromatography for determination of mole fractions and then summing products of each VOC component's vapor pressure and its mole fraction. For materials containing no non-VOC components, VOC composite partial pressure can be measured directly by ASTM Method D2879-10 Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.
- K. VOC Emissions from Spray Gun Cleaning Systems: VOC emissions shall be determined using South Coast AQMD "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" (October 3, 1989).

Remainder of Page Intentionally Left Blank