

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

**RULE 14 - SURFACE PREPARATION AND COATING OF LARGE APPLIANCES AND METAL FURNITURE**

**REGULATION 8  
ORGANIC COMPOUNDS**

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**REGULATION 8**  
**ORGANIC COMPOUNDS**  
**RULE 14**  
**SURFACE PREPARATION AND COATING OF LARGE APPLIANCES AND**  
**METAL FURNITURE**

(Adopted March 7, 1979)

**8-14-100 GENERAL**

**8-14-101 Description:** The purpose of this Rule is to limit emissions of volatile organic compounds (VOC) from the surface preparation and coating of large appliances and metal furniture. Any operation which is determined to be exempt from the provisions of this Rule shall be subject to the provisions of Rule 4, if not already subject to another rule of Regulation 8.

*(Amended 12/19/84; 6/7/89; 10/16/02)*

**8-14-110 Exemption, Low Usage Coatings:** The requirements of Sections 8-14-301 and 302 shall not apply to the use of any coating used in volumes less than 75.7 liters (20 gal) in any one calendar year, provided the requirements in Section 8-14-402 are satisfied. A person shall be limited to 208.1 liters (55 gallons) total coating per year under this exemption.

*(Amended 12/19/84; 1/7/87; 6/7/89; 6/1/94)*

**8-14-111 Exemption Touch-up:** The provisions of this Rule shall not apply to touch-up operations.

*(Amended 3/3/82; 1/7/87)*

**8-14-112 Exemption, Adhesives:** The provisions of this Rule shall not apply to the application of adhesives.

*(Adopted January 7, 1987)*

**8-14-113 Exemption, Aerosol Cans:** The provisions of this Rule shall not apply to coating operations employing hand-held aerosol cans. Such coating is subject to the provisions of Regulation 8, Rule 49 or to the California Air Resources Board aerosol coating product regulation found in Title 17 of the California Code of Regulations, beginning at Section 94520.

*(Adopted 1/7/87; Amended 6/20/90; 10/16/02)*

**8-14-114 Exemption Powder Coatings:** The requirements of Sections 8-14-302 and 310 shall not apply to the use of any powder coating provided the emission of VOC to the atmosphere does not exceed that which is equivalent to the use of coatings which comply with those limits.

*(Adopted 1/7/87; Amended 4/1/87; 6/7/89)*

**8-14-115 Deleted April 1, 1987**

**8-14-116 Deleted April 1, 1987**

**8-14-117 Deleted April 1, 1987**

**8-14-118 Deleted April 1, 1987**

**8-14-119 Deleted April 1, 1987**

**8-14-120 Limited Exemption, Specific Surface Preparation and Cleaning Operations:** The surface preparation standards in Section 8-14-321 shall not apply to (i) surface preparation of electrical and electronic components, (ii) stripping of cured inks, coatings and adhesives or cleaning of resin, coating, ink and adhesive mixing, molding and application equipment, or (iii) surface preparation associated with research and development operations; performance testing to determine coating, adhesive or ink performance; or testing for quality control or quality assurance purposes.

*(Adopted October 16, 2002)*

**8-14-200 DEFINITIONS**

**8-14-201 Air-Dried Coatings:** Any coating which is not heated above 90°C (194°F) for the purpose of curing or drying.

- 8-14-202 Baked Coatings:** Any coating which is cured or dried in an oven where the oven air temperature exceeds 90°C (194°F).  
*(Amended December 19, 1984)*
- 8-14-203 Deleted June 7, 1989**
- 8-14-204 Large Appliances:** Doors, cases, lids, panels and interior support parts of residential or commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products.
- 8-14-205 Metal Furniture:** Includes tables, chairs, waste baskets, beds, dishes, lockers, benches, shelving, file cabinets, room dividers, drapery hardware, window blinds and shades or other similar products or parts used to fabricate such products.  
*(Amended January 7, 1987)*
- 8-14-206 Volatile Organic Compound:** Any organic compound (excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate) which would be emitted during use, application, curing or drying of a solvent or surface coating.
- 206.1 For purposes of calculating VOC content of a coating, any water or any of the following non-precursor organic compounds:  
acetone  
methyl acetate  
parachlorobenzotrifluoride (PCBTF)  
cyclic, branched or linear, completely methylated siloxanes (VMS)  
shall not be considered to be part of the coating.
- 206.2 For the purposes of calculating the VOC content of a surface preparation or cleaning solvent, any water or the non-precursor organic compounds listed in subsection 8-19-206.1, above, shall be considered part of the volume of solvent but shall not be considered part of the VOC content of the solvent.  
*(Amended 1/7/87; 6/7/89; 12/20/95; 10/16/02)*
- 8-14-207 Touch-up:** That portion of the surface preparation or coating operation which is incidental to the main coating process but necessary to cover minor imperfections or mechanical damage incurred prior to intended use.  
*(Amended 12/19/84; 1/7/87; 10/16/02)*
- 8-14-208 Transfer Efficiency:** The ratio of the amount of coating solids adhering to the object being coated to the total amount of coating solids used in the application process, expressed as a percentage.  
*(Amended 3/3/82; 1/7/87)*
- 8-14-209 Pretreatment Wash Primer:** Any coating which contains a minimum of 0.5% acid by weight, is necessary to provide surface etching and is applied directly to bare metal surfaces to provide corrosion resistance and adhesion.  
*(Adopted 1/7/87; Amended 6/7/89)*
- 8-14-210 Powder Coating:** Any coating applied as a dry (without solvent or other carrier), finely divided solid which, when melted and fused, adheres to the substrate as a paint film.  
*(Adopted January 7, 1987)*
- 8-14-211 Adhesive:** Any coating which is applied for the purpose of bonding surfaces together.  
*(Adopted January 7, 1987)*
- 8-14-212 Solar Absorbant Coating:** Any coating which has as its primary purpose the absorption of solar radiation.  
*(Adopted January 7, 1987)*
- 8-14-213 Heat-Resistant Coating:** Any coating which during normal use must withstand temperatures of at least 204°C (400°F).  
*(Adopted January 7, 1987)*
- 8-14-215 Metallic Topcoats:** Any coating which contains more than 5 g/l (0.042 lb/gal) of metal particles, as identified on a technical or material safety data sheet, as applied, where such metal particles are visible in the dried film.  
*(Adopted 1/7/87; Amended 6/1/94)*
- 8-14-216 High-Gloss Coating:** Any coating which achieves at least 85% reflectance on a 60° meter when tested by ASTM Method D-523-1989.  
*(Adopted 1/7/87; Amended 6/7/89; 10/6/93)*
- 8-14-217 Deleted June 7, 1989**

- 8-14-218 High-Volume, Low-Pressure (HVLP) Spray:** Equipment used to apply coating by means of a gun which is designed to be operated and which is operated between 0.1 and 10.0 psig air atomizing pressure measured dynamically at the center of the air cap and at the air horns.  
*(Adopted 6/7/89; Amended 10/6/93; 10/16/02)*
- 8-14-219 Electrostatic Application:** The application of charged atomized paint droplets which are deposited by electrostatic attraction.  
*(Adopted June 7, 1989)*
- 8-14-220 Key System Operating Parameter:** An air pollution abatement equipment operating parameter, such as temperature, flow rate or pressure, that ensures operation of the abatement equipment within manufacturer specifications and compliance with the standards in Sections 8-14-302, and 310.  
*(Adopted June 1, 1994)*
- 8-14-221 Approved Emission Control System:** A system for reducing emissions to the atmosphere, consisting of an abatement device and a collection system, which achieves the abatement efficiency specified in the applicable standards at all times during the operation and meets the requirements of Regulation 2, Rule 1.  
*(Adopted October 16, 2002)*
- 8-14-222 Surface Preparation:** The cleaning of large appliances and metal furniture prior to coating, further treatment, sale, or intended use. Surface preparation of large appliances and metal furniture subject to and in compliance with Regulation 8, Rule 16: Solvent Cleaning Operations, is not subject to the surface preparation standards in this Rule.  
*(Adopted October 16, 2002)*
- 8-14-223 Electrical and Electronic Components:** Components and assemblies of components that generate, convert, transmit, or modify electrical energy. Electrical and electronic components include, but are not limited to, wires, windings, stators, rotors, magnets, contacts, relays, printed circuit boards, printed wire assemblies, wiring boards, integrated circuits, resistors, capacitors and transistors. Cabinets in which electrical and electronic components are housed are not considered electrical and electronic components.  
*(Adopted October 16, 2002)*
- 8-14-300 STANDARDS**
- 8-14-301 Deleted June 7, 1989**
- 8-14-302 Limits:** A person shall not apply to any large appliance or metal furniture part or product any coating with a VOC content in excess of the following limits, expressed as grams of VOC per liter of coating applied, excluding water, unless emissions to the atmosphere are controlled to an equivalent level by air pollution abatement equipment with an abatement device efficiency of at least 85% that meets the requirements of Regulation 2, Rule 1.
- |                          |                               |
|--------------------------|-------------------------------|
| 302.1 Baked Coatings     | 275 grams/liter (2.3 lbs/gal) |
| 302.2 Air-Dried Coatings | 340 grams/liter (2.8 lbs/gal) |
- (Amended 3/3/82; 12/19/84; 1/7/87; 6/7/89; 10/6/93)*
- 8-14-303 Deleted June 7, 1989**
- 8-14-304 Transfer Efficiency:** All persons subject to this Rule shall use a method of coating application with a transfer efficiency of 65% or greater. Application by properly operated electrostatic application or HVLP spray, flow coat, roller coat, dip coat including electrodeposition and brush coat will serve to comply with this section.  
*(Amended 3/3/82; 12/19/84; 6/7/89)*
- 8-14-305 Deleted October 6, 1993**
- 8-14-306 Deleted June 7, 1989**
- 8-14-307 Deleted June 7, 1989**
- 8-14-308 Prohibition of Specification:** No person shall require for use or specify the application of a coating or solvent subject to this Rule if such use or application results in a violation of any of the provisions of this Rule. The prohibition of this Section shall apply to all written or oral contracts under the terms of which any coating or solvent is to be applied to any large appliance for metal furniture product at any physical location within the District.

(Adopted 1/7/87; Amended 6/7/89; 10/16/02)

**8-14-309 Compliance Statement Requirement:** The manufacturer of coatings or solvents subject to this Rule shall include a designation of VOC as defined in Section 8-14-206.

(Adopted 6/7/87; Amended 4/1/87; 6/7/89; 10/16/02)

**8-14-310 Specialty Coating Limitations:** A person shall not apply to any large appliance or metal furniture any specialty coating with a VOC content in excess of the following limits, expressed as grams of VOC per liter (lb VOC per gal) of coating applied, excluding water, unless emissions to the atmosphere are controlled to an equivalent level by air pollution abatement equipment with an abatement device efficiency of at least 85% that meets the requirements of Regulation 2, Rule 1.

		Baked	Air-Dried
310.1	High-Gloss	360 (3.0)	420 (3.5)
310.2	Heat-Resistant	360 (3.0)	420 (3.5)
310.3	Metallic Topcoat	360 (3.0)	420 (3.5)
310.4	Pretreatment Wash Primer	420 (3.5)	420 (3.5)
310.5	Solar Absorbant	360 (3.0)	420 (3.5)

(Adopted 4/1/87; Amended 6/7/89; 10/16/93)

**8-14-320 Solvent Evaporative Loss Minimization:** Unless emissions to the atmosphere are controlled by an approved emission control system with an overall abatement efficiency of at least 85%, any person using organic solvent for surface preparation or cleanup:

- 320.1 Shall use closed containers for the storage or disposal of cloth or paper used for solvent surface preparation and cleanup.
- 320.2 Shall close containers of fresh or spent solvent, coating or catalyst when not in use.
- 320.3 Shall not use volatile organic compounds for the cleanup of spray equipment including paint lines with a VOC content in excess of 50 g/l (0.42 lbs/gal) unless the VOC can be pressurized through spray equipment with the atomizing air off and collected and stored in a closed container until recycled or properly disposed of offsite.

(Adopted 6/7/89; Amended 10/16/02)

**8-14-321 Surface Preparation Standards:** Effective June 1, 2003, no person shall use a surface preparation solvent with a VOC content that exceeds 50 g/l (0.42 lbs/gal) for surface preparation of any metal part or product unless emissions to the atmosphere are controlled to an equivalent level by an approved emission control system with an abatement device efficiency of at least 85 percent that meets the requirements of Regulation 2, Rule 1.

(Adopted October 16, 2002)

**8-14-400 ADMINISTRATIVE REQUIREMENTS**

**8-14-401 Deleted December 19, 1984**

**8-14-402 Low Usage Coating Petition:** Any person seeking to satisfy the conditions of Section 8-14-110 shall comply with the following requirements:

- 402.1 The user or specifier shall petition the APCO in writing that substitute complying coatings are not available.
- 402.2 If the APCO grants written approval, such petition will be repeated on an annual basis.
- 402.3 If the APCO grants written approval, such approval shall contain volume and VOC limit conditions.
- 402.4 Records shall be maintained as in Section 8-14-501.

(Adopted 3/3/82; Amended 12/19/84; 1/7/87; 6/7/89; 10/6/93)

**8-14-403 Deleted June 7, 1989**

**8-14-500 MONITORING AND RECORDS**

**8-14-501 Coating Records:** Any person using coatings or solvents subject to this Rule shall:

- 501.1 Maintain a current list of coatings in use which provides all of the coating data necessary to evaluate compliance, including the following information, as applicable:
- a. coating, catalyst and reducer used
  - b. quantity of each coating applied
  - c. VOC content of coating as applied
  - d. VOC content of surface preparation and clean up solvent, as applied.
- 501.2 Record on a daily basis the following information, as applicable:
- a. coating and mix ratio of components in the coating used
  - b. quantity of each coating applied
  - c. identification of specialty coating limit category
  - d. oven temperature
- 501.3 Record on a monthly basis the type and amount of surface preparation and clean up solvent unless more frequently specified in permit conditions imposed per Regulation 2-1-403.
- 501.4 Retain and have the records available for inspection by the APCO for two years.

*(Adopted 12/19/84; Amended 1/7/87; 4/1/87; 6/7/89; 6/1/94; 10/16/02)*

**8-14-502 Deleted October 6, 1993**

**8-14-503 Air Pollution Abatement Equipment, Recordkeeping Requirements:** Any person operating air pollution abatement equipment to comply with Sections 8-14-302, 310, 320 and/or 321, in addition to Section 8-14-501 shall record key system operating parameters on a daily basis.

*(Adopted 6/1/94; Amended 10/16/02)*

**8-14-600 MANUAL OF PROCEDURES**

**8-14-601 Analysis of Samples:** Samples of volatile organic compounds as specified in Sections 8-14-302 and 310 shall be analyzed as prescribed in the Manual of Procedures, Volume III, Method 21 or 22.

*(Adopted 3/17/82; Amended 12/19/84; 1/7/87; 4/1/87; 6/7/89)*

**8-14-602 Determination of Emissions:** Emissions of volatile organic compounds as specified in Sections 8-14-302, 310, 320 and/or 321 shall be measured as prescribed by any of the following methods: 1) BAAQMD Manual of Procedures, Volume IV, ST-7, 2) EPA Method 25 or 25A. When either EPA Method 25 or 25A is used, control device equivalency shall be determined as prescribed in 55 FR 26865 (June 29, 1990). A source shall be considered in violation if the VOC emissions measured by any one of the referenced test methods exceed the standards of this rule.

*(Adopted 3/17/82; Amended 12/19/84; 1/7/87; 6/7/89; 6/1/94; 10/16/02)*

**8-14-603 Determination of Acid Content:** Measurement of acid content as specified in Section 8-14-209 shall be determined in accordance with ASTM Method D-1613-96.

*(Adopted 10/6/93; Amended 10/16/02)*

**8-14-604 Analysis of Solvent Samples:** Samples of volatile organic compounds as specified in Section 8-14-320 or 321 shall be analyzed as prescribed in the Manual of Procedures, Volume III, Method 31.

*(Adopted October 16, 2002)*

**8-14-605 Analysis of Exempt Compounds:** Samples of PCBTF, VMS, and methyl acetate shall be analyzed by the Manual of Procedures, Volume III, Method 41, 43 and by ASTM Method D-6133-00, respectively.

*(Adopted October 16, 2002)*