

**REGULATION 8
ORGANIC COMPOUNDS
RULE 4
GENERAL SOLVENT AND SURFACE COATING OPERATIONS**

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**REGULATION 8
ORGANIC COMPOUNDS
RULE 4
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8-4-100 GENERAL

8-4-101 Description: The purpose of this Rule is to limit emissions of volatile organic compounds from the use of solvents and surface coatings in any operation other than those specified by other Rules of this Regulation 8. The provisions of this Rule shall apply, but are not limited to, model making, printed circuit board manufacturing and assembly, electrical and electronic component manufacturing, surface coating of test panels, training facilities where the application of coating is for training purposes, stencil coatings, low usage coating activities exempt from other Regulation 8 Rules, coatings specifically exempt from other Regulation 8 Rules or solvent usage not specified by other Regulation 8 Rules.

(Amended 3/17/82; 5/15/96; 10/16/02)

8-4-110 Deleted May 15, 1996

8-4-111 Deleted December 5, 1990

8-4-112 Deleted May 15, 1996

8-4-113 Exemption, Specified Operations: This Rule shall not apply to operations that are subject to the requirements of other Rules of this Regulation 8, or which comply with appropriate limitations of those Rules prior to their effective dates.

8-4-114 Exemption, Aerosol Cans: The provisions of this Rule shall not apply to surface coating operations using non-refillable aerosol containers. 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 6/20/90; Amended 10/16/02)

8-4-115 Exemption, Film Cleaners: This rule shall not apply to film cleaning operations that use 1,1,1-trichloroethane exclusively.

(Adopted May 15, 1996)

8-4-116 Limited Exemption, Specific Surface Preparation and Cleaning Operations: The surface preparation standards in Section 8-4-313 shall not apply to (i) the surface preparation of electrical and electronic components, precision optics, or numismatic dies; (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; medical device or pharmaceutical manufacturing operations; performance testing to determine coating, adhesive or ink performance; or testing for quality control or quality assurance purposes.

(Adopted October 16, 2002)

8-4-117 Limited Exemption, Operations Subject to Specific Rules: The surface preparation standards in Section 8-4-313 shall not apply to surface preparation of material subject to the following Regulation 8 surface coating rules or made subject to Rule 4 by specific exemption or reference in any of the following rules:

- 117.1 Rule 3: Architectural Coating
- 117.2 Rule 11: Metal Container, Closure and Coil Coating
- 117.3 Rule 12: Paper, Fabric and Film Coating
- 117.4 Rule 13: Light and Medium Duty Motor Vehicle Assembly Plants
- 117.5 Rule 14: Surface Coating of Metal Furniture and Large Appliances
- 117.6 Rule 19: Surface Coating of Miscellaneous Metal Parts and Products
- 117.7 Rule 20: Graphic Arts Printing and Coating Operations
- 117.8 Rule 23: Coating of Flat Wood Paneling and Wood Flat Stock
- 117.9 Rule 26: Magnet Wire Coating Operations
- 117.10 Rule 29: Aerospace Assembly and Component Coating Operations
- 117.11 Rule 30: Semiconductor Wafer Fabrication Operations
- 117.12 Rule 31: Surface Coating of Plastic Parts and Products

- 117.13 Rule 32: Wood Products Coating
- 117.14 Rule 35: Coating, Ink and Adhesive Manufacturing
- 117.15 Rule 38: Flexible and Rigid Disc Manufacturing
- 117.16 Rule 43: Marine Vessel Coating
- 117.17 Rule 45: Motor Vehicle and Mobile Equipment Coating Operations
- 117.18 Rule 50: Polyester Resin Operations

(Adopted October 16, 2002)

8-4-118 Limited Exemption, Production Machinery: Until June 1, 2004, moving and working surfaces of machinery used for product development and in production are not required to comply with the surface preparation standards in Section 8-4-313.

(Adopted October 16, 2002)

8-4-200 DEFINITIONS

8-4-201 Deleted May 15, 1996

8-4-202 Deleted May 15, 1996

8-4-203 Deleted May 15, 1996

8-4-204 Deleted May 15, 1996

8-4-205 Deleted May 15, 1996

8-4-206 Organic Solvents: Organic liquids which are used as diluents, thinners, dissolvers, viscosity reducers, cleaning agents, or for other similar uses, but does not include those used as fuel, antiseptics or anesthetics.

(Renumbered March 17, 1982)

8-4-207 Surface Coating: Any paint, lacquer, varnish, ink, adhesive or similar material.

(Renumbered March 17, 1982)

8-4-208 Deleted May 15, 1996

8-4-209 Deleted May 15, 1996

8-4-209 Deleted May 15, 1996

8-4-210 Deleted May 15, 1996

8-4-211 Key System Operating Parameter: An air pollution abatement equipment operating parameter, such as temperature, flow rate or pressure, that indicates operation of the abatement equipment within manufacturer specifications, and compliance with the standards of this regulation.

(Adopted 6/1/94; Amended 5/15/96)

8-4-212 Solvent Cleaning Operation: The removal of uncured adhesives, inks, coatings, and contaminants including: dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas.

(Adopted May 15, 1996)

8-4-213 Source: Any article, machine, equipment, operation, contrivance or related groupings of such which may produce and/or emit air pollutants as specified by the permit to operate.

(Adopted May 15, 1996)

8-4-214 Volatile Organic Compound (VOC): Any organic compound of carbon (excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate) which would be emitted during use of a solvent or other material.

214.1 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 part of the coating.

214.2 For the purposes of calculating the VOC content of cleanup and surface preparation solvent, any water or the non-precursor organic compounds listed in subsection 8-4-214.1, above, shall be considered part of the volume of the solvent but shall not be considered part of the VOC content of the solvent.

(Adopted 5/15/96; Amended 10/16/02)

- 8-4-215 Printed Circuit Board Manufacturing and Assembly:** A printed circuit board is an electronic component designed for interconnecting other electronic components. It consists of a deposited conductive material on an insulating surface. When additional components are added to the printed circuit board, it is known as an assembly.
(Adopted May 15, 1996)
- 8-4-216 Test Panel:** A panel used to evaluate coating performance.
(Adopted May 15, 1996)
- 8-4-217 Training Facility:** Any facility which applies coatings for training purposes without receiving compensation for the coating application.
(Adopted May 15, 1996)
- 8-4-218 Stencil Coatings:** Coatings that are applied by template in order to add designs, letters and/or numbers to the products.
(Adopted May 15, 1996)
- 8-4-219 Model Making:** A prototype or product design that is used as a pattern.
(Adopted May 15, 1996)
- 8-4-220 Surface Preparation:** The cleaning of surfaces prior to coating, further treatment, sale, or intended use. Solvent cleaning operations subject to and in compliance with Regulation 8, Rule 16: Solvent Cleaning Operations, are not subject to this Rule.
(Adopted October 16, 2002)
- 8-4-221 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)
- 8-4-222 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)
- 8-4-223 Precision Optics:** The optical elements used in electro-optical devices that are designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes of light energy levels.
(Adopted October 16, 2002)
- 8-4-224 Medical Device:** An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article, including any component or accessory that is, (i) intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of diseases, or (ii) is intended to affect the structure or any function of the body, or (iii) is defined in the National Formulary or the United States Pharmacopoeia or any supplement to it.
(Adopted October 16, 2002)
- 8-4-225 Medical Device and Pharmaceutical Manufacturing Operations:** Medical devices; pharmaceutical products; and associated manufacturing and product handling equipment and material, work surfaces, maintenance tools and room surfaces that are subject to US FDA current Good Manufacturing/Laboratory Practice, or CDC/NIH guidelines for biological disinfection of surfaces.
(Adopted October 16, 2002)
- 8-4-226: Pharmaceutical Products:** A preparation or compound, which includes any drug, analgesic, decongestant, antihistamine, cough suppressant, vitamin, mineral or herb supplement intended for human or animal consumption and used to cure, mitigate or treat disease or improve or enhance health.
(Adopted October 16, 2002)
- 8-4-300 STANDARDS**
- 8-4-301 Deleted May 15, 1996**

- 8-4-302 Solvents and Surface Coating Requirements:** A person shall not use solvents or apply surface coatings unless one or more of the following requirements are satisfied:
- 302.1 A person shall not emit more than 4,533 kg (5 tons) of volatile organic compounds (VOC) from any source during any calendar year; or
 - 302.2 Emissions are controlled by an approved emission control system with an overall abatement efficiency of 85% on a mass basis. If reduction is achieved by incineration, at least 90% by weight of the organic compound emissions shall be oxidized to carbon dioxide; or
 - 302.3 The coating operation uses a coating with a VOC content less than or equal to 420 grams per liter (3.5 lb/gal) of coating as applied.

(Amended 3/17/82; 6/1/94; 5/15/96; 10/16/02)

8-4-303 Deleted June 1, 1994

8-4-304 Deleted May 15, 1996

8-4-310 Deleted May 15, 1996

8-4-311 Deleted May 15, 1996

8-4-312 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 and cleanup or any person mixing, using or disposing of organic solvent:

- 312.1 Shall use closed containers for the storage or disposal of cloth or paper used for solvent surface preparation and cleanup.
- 312.2 Shall not use organic solvent for the cleanup of spray equipment, including paint lines, with a VOC content in excess of 50 g/l (0.42 lb/gal) unless either, (i) solvent is pressurized through spray equipment with atomizing air off or dispensed from a small non-atomizing container, and collected and stored in a closed container until recycled or properly disposed of offsite, or (ii) a spray gun washer subject to and in compliance with the requirements of Regulation 8, Rule 16 is used.
- 312.3 Shall close containers of solvent or coating when not in use.

(Adopted 5/15/96; Amended 10/16/02)

8-4-313 Surface Preparation Standards: Effective June 1, 2003, no person shall use a solvent with a VOC content that exceeds 50 g/l (0.42 lbs/gal), as applied, for surface preparation in any operation subject to this Rule unless emissions to the atmosphere are controlled to an equivalent level by an approved emission control system with an overall abatement efficiency of at least 85 percent.

(Adopted October 16, 2002)

8-4-500 MONITORING AND RECORDS

8-4-501 Recordkeeping Requirements: Any person using coatings or solvents subject to this Rule shall:

- 501.1 Maintain a current list of coatings and solvents in use that provide all of the data necessary to evaluate compliance, such as VOC content and mix ratios of coatings, catalysts and reducers and density and VOC content of solvent.
- 501.2 Record on an annual basis the quantity of coating applied.
- 501.3 Record the air pollution abatement equipment key system operating parameters on a daily basis.
- 501.4 Record, on a monthly basis, coating usage for coatings subject to subsection 8-4-302.3 and solvents used for surface preparation and clean up.
- 501.5 Records shall be retained and available for inspection by the APCO for the previous 24 -month period.

(Adopted 6/1/94; Amended 5/15/96; 10/16/02)

8-4-502 Burden of Proof: The burden of proof of eligibility for exemption pursuant to Section 8-4-115 is on the applicant. Persons seeking an exemption shall maintain adequate records and furnish them to the APCO upon request.

(Adopted May 15, 1996)

8-4-600 MANUAL OF PROCEDURES

8-4-601 Deleted June 1, 1994

8-4-602 Determination of Emissions: Emissions of volatile organic compounds as specified in Section 8-4-302, 312 and/or 313 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. A source shall be considered in violation if the VOC emissions measured by any of the referenced test methods exceed the standards of this rule. Emissions resulting from the drying of products for the first 12 hours after their removal from any operation, and emissions from clean-up solvent, shall be included when determining compliance with this Rule.

(Amended 3/17/82; 6/1/94; 5/15/96; 10/16/02)

8-4-603 Analysis of Samples: Samples of volatile organic compounds as specified in Section 8-4-302 shall be analyzed as prescribed in the Manual of Procedures, Volume III, Method 21 or 22. Samples of volatile organic compounds as specified in Section 8-4-312 and/or 313 shall be analyzed as prescribed in the Manual of Procedures, Volume III, Method 31 for the determination of VOC.

(Adopted 6/1/94; Amended 5/15/96; 10/16/02)

8-14-604 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)