RULE 425 AEROSPACE COATING OPERATIONS

(Adopted 8/5/89; revised 3/3/92; 9/14/99; 5/18/2004; 02/23/2010)

A. Applicability

A.1 This Rule is applicable to the Coating, masking, surface cleaning and paint stripping of Aerospace Components and the cleanup of Equipment associated with these operations. Terms applicable to this Rule are defined in Rule 101 - Definitions.

A.2 Any Coating, cleaning or surface preparation operation which is exempt from all or a portion of this Rule pursuant to Section A.3 shall comply with the provisions of Rule 417, Organic Solvents.

A.3 Exemptions

A.3.a A stationary source using 3 gallons or less of aerospace Coating per day is exempt from the requirements contained in Section B.

A.3.b The ROC limits specified in Table 425-1 of this Rule shall not apply to Coatings with separate formulations that are used in volumes of less than 20 gallons per formulation per year, provided that no more than 50 gallons total of such separate formulations are applied at the facility annually and it can be demonstrated that complying Coatings are not available.

A.3.c (Deleted)

A.3.d Touch-Up Coatings and Stencil Coatings.

A.3.e Coatings applied using non-refillable hand held aerosol spray containers.

A.3.f Prepreg Composite Materials.

A.4 Any facility claiming an exemption according to Section A.3.a or A.3.b must submit a request for exemption to the Air Pollution Control District and provide the following information in a District approved format:

A.4.a types of Coatings to be used;

A.4.b maximum volume of Coatings to be applied daily and yearly;

A.4.c mix ratio of Coatings and Reducers or quantities of any Coating components, Reducers of thinners;

A.4.d grams of ROC per liter of Coating, less water and less exempt organic compounds;

A.4.e method of application.

A.5 A request for continued exemption must be resubmitted to the Air Pollution Control District annually, prior to the first day of February, and contain updated usage information.

A.6 The Owner or Operator shall not qualify for the exemptions specified in Sections A.3.b and A.3.c of this Rule, unless written approval is received from the Air Pollution Control District stating that the facility qualifies for the exemptions.

A.7 An exceedance of the low usage limit specified in Sections A.3.a and A.3.b shall constitute a violation of this Rule.

Table 425-1

Coating	Grams of ROC Per Liter of Coating, Less Water, and Exempt Compounds
Primer	350
Topcoat	420
Adhesive Bonding Primers:	
Structural	850
For Elastomers and Elastomeric Adherents	850
All other Adhesive Bonding Primers	850
Adhesives:	
Structural Autoclavable	50
Structural Epoxy	50
Structural Non-Autoclavable	250
Elastomeric	850
All Other Adhesives	250
Flight-Test Coating	420
Fuel-Tank Coating	420
High Temperature Thermal Flash Resistant Coatings	800
Pretreatment Coatings	780
Radiation-effect Coating	800
Solid-film Lubricant:	

Coating	Grams of ROC Per Liter of Coating, Less Water, and Exempt Compounds
Fasteners Lubrication	880
Non-Fasteners Lubrication	880
Space-Vehicle Coatings:	
Electrostatic Discharge Protection	800
Thermocontrol Coatings	600
Other Space-vehicle Coatings	1000
Temporary Protective Coatings	250

B. Requirements

B.1 A Person shall not apply or solicit the application of any Coating or combination of Coatings, aerosols, or Adhesives with a ROC content, less water and less Exempt Compounds, in excess of the limits in Table 425-1. The requirements of this paragraph shall apply to all written or oral agreements.

B.2 Manufacturers of any Coating subject to this Rule shall display the maximum ROC content of the Coating after any mixing or thinning as recommended by the manufacturer. The ROC content shall be displayed as grams of ROC per liter of Coating. The volatile organic compound (VOC) content may be displayed instead of the Reactive Organic Compound (ROC) content as long as the manufacturer=s definition of VOC is consistent with the definition of ROC.

B.3 Closed containers shall be used for disposal and storage of cloth, paper, or other solvent-containing materials used for surface preparation, Coating, cleanup, and paint removal. Upon final disposal, the solvent containing material shall be transported to a permitted waste disposal facility in sealed metal or plastic molded drums with snap-on or screw-type lids.

B.4 Solvents containing Reactive Organic Compounds shall not be used for the cleanup of spray Equipment in Aerospace Component Coating operations unless 85 percent of the Reactive Organic Compound vapors are collected and properly disposed of such that they are not emitted to the Atmosphere.

B.5 A Person shall not use solvents for surface cleaning, clean-up or the cleaning of components, which have a ROC content of more than 200 grams per liter or has a composite vapor pressure greater than 45 mm Hg at a temperature of 20 degrees C (68 degrees F) for surface preparation or cleanup of Aerospace Components. This prohibition does not apply to the stripping of Coating.

B.6 A Person shall not use or specify for use within the District, a Stripper which contains more than 200 grams per liter ROC content.

B.7 A Person shall not apply any Maskant to Aerospace Components unless:

B.7.a the Maskant contains less than 600 grams of ROC per liter of Coating, less water and Exempt Compounds, as applied.

B.8 A Person may comply with the provisions of Section B.1 and B.7 by using air pollution Control Equipment with a capture rate of at least 90 percent and Control Efficiency of at least 95 percent by weight. Prior approval must be received from the Air Pollution Control Officer.

B.9 A Person shall not apply Coatings in aerospace Coating operations subject to this Rule except by means of the following application methods:

B.9.a Electrostatic spray applications, or

B.9.b Flow coat application, or

B.9.c Dip coat application, or

B.9.d Hand Application Methods, or

B.9.e Airless spray application for use with Maskants and Temporary Protective Coatings only, or

B.9.f High-volume low-pressure (HVLP) spray application, or

B.9.g Other Coating application methods that are demonstrated to achieve a minimum of 65 percent Transfer Efficiency or have Transfer Efficiency at least equal to one of the above application methods, and which are used in such a manner that parameters under which they were tested are permanent features of the method. Such Coating application methods shall demonstrate transfer efficiency in accordance with South Coast Air Quality Management District method ASpray Equipment Transfer Efficiency Test Procedure for Equipment User,@ May 24, 1989.

B.10 Except for electrostatic spray guns, a Person shall not use materials containing ROC for the cleaning of spray guns in Coating operations unless the spray gun is cleaned in an Enclosed Gun Cleaner. The enclosed spray gun cleaner must not be open to the ambient air when in use and must have a mechanism to force the cleanup material through the gun while the cleaner is in operation. Alternative gun cleaning systems may be used

provided the emission loss from the system is demonstrated to be less than or equivalent to the emission loss from an Enclosed Gun Cleaner. The equivalency demonstration must be performed pursuant to the test method specified in Section D.6 of this Rule.

C. Record Keeping Requirements

C.1 Each facility shall maintain a comprehensive listing of Coatings, Maskants, Strippers, surface preparation and cleaning materials, and spray Equipment cleaning materials and solvents applied at the facility in the District approved format.

For each Coating listed in the comprehensive list, the facility shall provide a Coating specification sheet in the District approved format. The Coating specification sheet shall contain as a minimum:

C.1.a Coating name and manufacturer identification

C.1.b Specific mixing instructions

C.1.c ROC content as applied

C.1.d Weight percent water as applied

C.1.e Weight percent Exempt Compound as applied

C.1.f Solvent composition and density as applied

C.1.g Solids content, less water and Exempt Compound as applied

C.2 A Person who applies Coatings and/or solvents to Aerospace Components shall maintain a daily record of each Coating, Stripper, and solvent used. Maintain daily inventory (dispensing) records of solvents used or Equipment cleaning and surface cleaning operations. Maintain records of material additions to dip tank for dip Coating operations.

Records shall at all times be retained at the facility for a period of the previous five years and be made available for review by the District upon request. Copies of such records shall be supplied to a District representative upon request of the representative.

C.3 By the first day of April of each year, each facility shall submit a report to the District which states the total volume of each Coating and solvent applied to Aerospace Components during the previous calendar year. A District approved reporting format shall be used.

C.3.a Daily usage records of Coatings, solvents, and paint Strippers. shall include, but not be limited to:

C.3.a.1 The amount and type of Coating used in each piece of Application Equipment.

C.3.a.2 The method of application.

C.3.a.3 The amount of ROC in each Coating, the volume of each Coating and the volume of thinners at time of application.

C.3.a.4 The amount of other solvent and exempt solvent used.

C.3.a.5 The ROC content of each solvent.

C.3.a.6 The solids content of each Coating.

C.4 As an alternative record keeping plan an aerospace operation may use purchase records and product inventories to document the type and quantities of Coatings used at a Source. The plan shall be submitted in writing to the District, and shall be adequate to demonstrate compliance with the applicable provisions of this Rule.

D. Test Methods

D.1 The ROC content of Coatings and solvent shall be determined using EPA Reference Method 24 or its constituent methods.

D.2 The solid content of pretreatment Coatings shall be determined using ASTM Method D2369-03.

D.3 The acid content of pretreatment Coatings shall be determined using ASTM Method D1639-90e1.

D.4 The composite vapor pressure of a blended solvent shall be determined by quantifying the amount of each organic compound in the blend using gas chromatographic analysis (ASTM 2306-00) and by calculating the composite vapor pressure of the solvent by summing the partial pressures of each component. For the purpose of this calculation, the blend shall be assumed to be an ideal solution where Raoult's Law applies.

D.5 The ROC emissions from enclosed systems used to clean Coating Application Equipment shall be determined using the South Coast Air Quality Management District General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems.

D.6 The transfer efficiency of alternative application methods shall be determined in accordance with the South Coast Air Quality Management District method ASpray Equipment Transfer Efficiency Test Procedure for Equipment User,@ May 24, 1989.

D.7 Control Efficiency of the emission Control Device shall be determined in accordance with EPA Method 25.

D.8 Capture Efficiency of the system shall be determined in accordance with U.S. EPA AGuidelines for Determining Capture Efficiency,@ dated January 9, 1995, and the methods found in 40 CFR 51, Appendix M, Method 204 through Method 204F.

D.9 Destruction Efficiency, measured and calculated as carbon, of the system shall be determined in accordance with U.S. EPA test methods found in Appendix A, Methods 18, 25 and 25A at 40 CFR 60.