

**RULE 441 ORGANIC SOLVENTS**  
**Adopted 12-6-78****INDEX**

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**100 GENERAL**

- 101 **PURPOSE:** To limit emissions of organic solvents into the atmosphere that may result from the use of organic solvents.
- 102 **EXEMPTIONS:** The provisions of this rule shall not apply to:
- 102.1 The manufacture of organic solvents, or the transport or storage of organic solvents or materials containing organic solvents.
  - 102.2 The spraying or other employment of insecticides, pesticides, or herbicides.
  - 102.3 The employment, application, evaporation or drying of saturated halogenated hydrocarbons or perchloroethylene.
  - 102.4 The use of any material, in any article, machine, equipment or other contrivance described in Sections 301, 302, 303, or 305 of this rule if:
    - a. The volatile content of such material consists only of water and organic solvents, and
    - b. The organic solvents comprise not more than 20% by volume of said volatile content, and
    - c. The volatile content is not photochemically reactive as defined as in section 203 of this rule.
    - d. The organic solvent or any material containing organic solvent does not come into contact with flame.
  - 102.5 The use of any material, in any article, machine, equipment or other contrivance described in Sections 301, 302, 303 or 305 of this rule.
    - a. The organic solvent content of such material does not exceed 20% by volume of said material, and
    - b. The volatile content is not photochemically reactive as defined in section 203 of this rule, and
    - c. The organic solvent or any material containing organic solvent does not come into contact with flame.
  - 102.6 The use of equipment for which other requirements are specified by Rules 446, 447, 448 or 449 or which are exempt from air pollution control requirements by said rules.

**200 DEFINITIONS**

- 201 **ORGANIC MATERIALS:** Chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.
- 202 **ORGANIC SOLVENTS:** Diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as solvents, viscosity reducers or cleaning agents, except that such materials which exhibit a boiling point higher than 105°C (221°F) at 0.5 millimeters mercury absolute pressure or having an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 105°C (221°F).
- 203 **PHOTOCHEMICALLY REACTIVE SOLVENTS:** Any solvent with an aggregate of more than 20% of its total volume composed of chemical compounds classified below or which exceed any of the following individual percentage composition limitations, referred to the total volume of solvent:
- a. A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cycle- olefinic type of unsaturation: 5%.
  - b. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8%.
  - c. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20%.

- 204 **SOLVENT CLASSIFICATION:** Whenever any organic solvent or any constituent of any organic solvent may be classified from its chemical structure into more than one of the above groups of organic compounds listed in section 203, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.

### 300 STANDARDS

- 301 **ORGANIC MATERIALS:** A person shall not discharge into the atmosphere more than 6.8 kilograms (15 pounds) of organic materials in any one day, nor more than 1.4 kilograms (3.1 pounds) in any one hour, from any article, machine, equipment or other contrivance, in which any organic solvent or any material containing organic solvent comes into contact with flame or is baked, heat-cured or heat-polymerized, in the presence of oxygen, unless said discharge has been reduced by at least 85%. Those portions of any series of articles, machines, equipment or other contrivances designed for processing a continuous web, strip or wire which emit organic materials and using operations described in this section shall be collectively subject to compliance with this section.
- 302 **PHOTOCHEMICALLY REACTIVE SOLVENTS:** A person shall not discharge into the atmosphere more than 18 kilograms (39.7 pounds) of organic materials in any one day, nor more than 3.6 kilograms (7.9 pounds) in any one hour, from any article, machine, equipment or other contrivance used under conditions other than described in Section 301 for employing, or applying, any photochemically reactive solvent, as defined in Section 203, or material containing such photochemically reactive solvent, unless said discharge has been reduced by at least 85%. Emissions of organic materials into the atmosphere resulting from air or heated drying of products for the first 12 hours after their removal from any article, machine, equipment, or other contrivance described in this section shall be included in determining compliance with this section. Emissions resulting from baking, heat-curing, or heat-polymerizing as described in Section 301 shall be excluded from determination of compliance with this section. Those portions of any series of articles, machines, equipment or other contrivances designed for processing for a continuous web, strip, or wire which emit organic materials and using operations described in this section shall be collectively subject to compliance with this section.
- 303 **NON-PHOTOCHEMICALLY REACTIVE SOLVENTS:** A person shall not discharge into the atmosphere more than 1350 kilograms (2,970 pounds) of organic materials in any one day, nor more than 200 kilograms (441 pounds) in any one hour, from any article, machine, equipment or other contrivance in which any non-photochemically reactive organic solvent or any material containing such solvent is employed or applied, unless said discharge has been reduced by at least 85%. Emissions of organic materials into the atmosphere resulting from air or heated drying of products for the first 12 hours after their removal from any article, machine, equipment, or other contrivance described in this section shall be included in determining compliance with this section. Emissions resulting from baking, heat-curing, or heat-polymerizing as described in Section 301 shall be excluded from determination of compliance with this section. Those portions of any series of articles, machines, equipment, or other contrivance designed for processing a continuous web, strip or wire which emit organic materials and using operations described in this section shall be collectively subject to compliance with this section.
- 304 **SOLVENT DISPOSAL:** A person shall not, during any one day, dispose of a total of more than 5 liters (1.3 gallons) of any photochemically reactive solvent, as defined in section 203 or of any material containing more than 5 liters (1.3 gallons) of any such photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

- 305     **CLEANUP:** Emissions of organic materials into the atmosphere from cleanup with cleanup with photochemically reactive solvent as defined in Section 203 of any article, machine, equipment or other contrivance described in Sections 301, 302 or 303 shall be included with the other emissions of organic materials from that article, machine, equipment or other contrivance for determining compliance with this rule.
- 306     **OTHER LIMITATIONS:** In addition to other restrictions contained in these rules and regulations:
- 306.1   A person shall not use, in any dry cleaning operation, organic solvents containing 4% or more by volume of any photochemically reactive organic material as defined in Section 203 unless the emissions of the discharged organics are reduced by 90% or more by use of any of the methods described in Section 307.
- 306.2   A person shall not discharge into the atmosphere any organic materials from surface degreasing operations unless they are either reduced by at least 85%, or unless such materials are not photochemically reactive as defined in Section 203.
- 306.3   A person shall not manufacture, for use within Sacramento County, nor use any photochemically reactive solvent as defined in Section 203 for the purpose of thinning or diluting any metal surface coating.
- 307     **REQUIRED REDUCTIONS:** Emissions of organic materials into the atmosphere required to be controlled by Sections 301, 302 or 303 shall be reduced by:
- 307.1   Incineration, provided that 90% or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide, or
- 307.2   Absorption, or
- 307.3   Processing in a manner determined by the Air Pollution Control Officer to be not less effective than 307.1 or 307.2 above.

#### 400     **ADMINISTRATIVE REQUIREMENTS**

- 401     **EQUIPMENT MAINTENANCE:** A person incinerating, adsorbing, or otherwise processing organic material pursuant to this rule shall provide, properly install, and maintain in calibration, in good working order and in operation, devices as specified in the Authority to Construct or the Permit to Operate, or as specified by the Air Pollution Control Officer, for indicating temperatures, pressures, rates of flow or other operating conditions necessary to determine the degree of effectiveness of air pollution control.

#### 500     **MONITORING AND RECORDS**

- 501     **COMPOSITION AND CONSUMPTION RECORDS:** Any person using organic solvents or any materials containing organic solvents shall supply the Air Pollution Control Officer, upon request, and in the manner and form prescribed by him, written evidence of the chemical composition, physical properties and amount consumed for each organic solvent used.

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