

RULE 417. ORGANIC SOLVENTS

Adopted: 09/05/74

- A. A person shall not discharge more than 15 pounds of organic materials into the atmosphere in any one day, nor more than 3 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, heatcured or heat-polymerized, in the presence of oxygen, unless said discharge has been reduced by at least 85 percent. 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 use continuous operations described in this section shall be collectively subject to compliance with this section.
- B. A person shall not discharge more than 40 pounds of organic materials into the atmosphere in any one day, nor more than 8 pounds in any one hour, from any article, machine, equipment or other contrivance used under conditions other than described in section (A), for employing or applying, any photochemically reactive solvent, as defined in section (J), or material containing such photochemically reactive solvent, unless said discharge has been reduced by at least 85 percent. Emissions of organic materials into the atmosphere resulting from air or heating 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 (A) 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 a continuous web, strip or wire which emit organic materials and use operations described in this section shall be collectively subject to compliance with this section.
- C. A person shall not discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, nor more than 450 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 per-cent. 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 (A) 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 a continuous web, strip or wire which emit organic materials and use operations described in this section shall be collectively subject to compliance with this section.
- D. Emissions of organic materials to the atmosphere from the cleanup with photochemically reactive solvent, as defined in section (J), of any article, machine, equipment or other contrivance described in sections (A), (B), or (C) shall be included with the other emissions or organic materials from that article, machine, equipment or other contrivance for determining compliance with this rule.

- E. Emissions of organic materials into the atmosphere required to be controlled by sections (A), (B), or (C) shall be reduced by:
1. Incineration, provided that 90 percent or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide, or
  2. Adsorption, or
  3. Processing in a manner determined by the Air Pollution Control Officer to be not less effective than (1) or (2) above.
- F. A person incinerating, adsorbing or otherwise processing organic materials 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 and recording temperatures, pressures, rates of flow or other operating conditions necessary to determine the degree and effectiveness of air pollution control.
- G. 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 compositions, physical properties and amount consumed for each organic solvent used.
- H. The provisions of this rule shall not apply to:
1. The manufacture of organic solvents, or the transport or storage of organic solvents or materials containing organic solvents.
  2. The use of equipment for which other requirements are specified by Rules 417, 418, 419 and 420 or which are exempt from air pollution control requirements by said rules.
  3. The spraying or other employment of insecticides, pesticides or herbicides.
  4. The employment, application, evaporation or drying of saturated halogenated hydrocarbons or perchloroethylene.
  5. The use of any material, in any article, machine, equipment or other contrivance described in sections (A), (B), (C) or (D), if:
    - (i) the volatile content of such material consists only of water and organic solvents, and
    - (ii) the organic solvents comprise not more than 20 percent of said volatile content, and
    - (iii) the volatile content is not photochemically reactive as defined in section (J), and
    - (iv) the organic solvent or any material containing organic solvent does not come into contact with flame.

6. The use of any material, in any article, machine, equipment or other contrivance described in sections (A), (B), (C) or (D), if:
  - (i) the organic solvent content of such material does not exceed 20 percent by volume of said materials and
  - (ii) the volatile content is not photochemically reactive as defined in section (J), and
  - (iii) more than 50 percent by volume of such volatile material is evaporated before entering a chamber heated above ambient application temperature and
  - (iv) the organic solvent or any material containing organic solvent does not come into contact with flame.
7. The use of any material, in any article, machine, equipment or other contrivance described in sections (A), (B), (C) or (D), if:
  - (i) the organic solvent content of such material does not exceed 5 percent by volume of said material and
  - (ii) the volatile content is not photochemically reactive as defined in section (J) and
  - (iii) the organic solvent or any material containing organic solvent does not come into contact with flame.
- I. For the purposes of this rule, organic solvents include diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as dissolvers, viscosity reducers or cleaning agents, except that such materials which exhibit a boiling point higher than 220 F. at 0.5 millimeter mercury absolute pressure or have an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 220 F.
- J. For the purposes of this rule, photochemically reactive solvent is any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:
  1. A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketons having an olefinic or cyclo-olefinic type of unsaturation: 5 percent;
  2. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent;
  3. A combination of ethylbenzene, ketons having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups or organic compounds, it shall be considered as a member of the most reactive chemical group that is, that group having the least allowable percentage of the total volume of solvents.

- K. For the purposes of this rule, organic materials are defined as chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

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