

## **Revision to Definition of Volatile Organic Compounds – Exclusion of Propylene Carbonate and Dimethyl Carbonate**

### **ACTION**

On January 13, 2009 the Environmental Protection Agency (EPA) issued a [final rule](#) that no longer requires two compounds, propylene carbonate and dimethyl carbonate to be regulated as volatile organic compounds (VOCs) under the Clean Air Act for purposes of meeting the national ambient air quality standard for ozone.

According to columnist for *Metal Finishing* magazine John B. Durkee, PhD, PE, dimethyl carbonate, a highly effective solvent used in paints and coatings; has significant miscibility with water so that it may also be used in waterborne paints and adhesives. It has solubility and other properties that might make it a replacement for trichloroethylene in solvent cleaning operations.

Of more interest to this author is that the latter has solubility and other properties that might make it a replacement for trichloroethylene in solvent cleaning operations.

The final rule will allow, but does not require, states to remove regulatory controls on these two compounds that are part of state implementation plans designed to help states meet the national air quality standards for ground-level ozone.

EPA is excluding these two compounds as VOCs because scientific evidence shows they are "negligibly reactive," meaning they contribute little or nothing to the formation of smog. Excluding these compounds as VOC will help states to focus on controlling emissions of demonstrated ozone precursors to meet the national ambient air quality standards for ground-level ozone.

EPA carefully reviewed and considered all public comments before making the decision to exclude these compounds from regulation as a VOC. A 30-day public comment period was held and comments received supported going forward with this action.

EPA took public comments on whether an alternative metric (mole, or molecule, basis, rather than mass basis) should be used for evaluating these exemptions. The public comments supported using the mass basis for the exemption which EPA did in this action.

These two compounds are not listed as hazardous air pollutants under the Act. Hazardous air pollutants, also known as air toxics, are pollutants are known or suspected to cause cancer or other serious health effects such as birth defects or reproductive effects.

Since these compounds contain no chlorine or bromine, they do not deplete stratospheric ozone.

By excluding these compounds as VOCs, today's action will make it easier and less expensive for industry to use these compounds as solvents in a variety of products including paints, inks and adhesives. These compounds may possibly be used as a substitute for other solvents which are more harmful to the environment and which are more strictly regulated.

### **BACKGROUND**

VOCs contribute significantly to the formation of ground-level ozone (smog). Exposure to ground-level ozone can cause serious respiratory illness.

Areas with ozone air pollution levels that exceed national ambient air quality standards must develop state implementation plans, or SIPs, that include strategies for reducing ground-level ozone. These plans may include VOC emission limits.

A compound may be excluded as a VOC as a result of public petitions and new scientific data that demonstrate its negligible effect on the formation of smog. Since 1977, EPA has removed 53 specific compounds or classes of compounds from the list of VOCs that contribute to smog formation. EPA's policy on VOCs was codified on February 3, 1992 in a revised regulation, "Requirements for Preparation, Adoption, and Submittal of State Implementation Plans."

**FOR MORE INFORMATION**

- To download a copy of this notice, go to: <http://www.epa.gov/ttn/oarpg/t1pfpr.html>
- [New EPA Directive Exempts Popular Cleaning Agent from VOC Status](#). By John B. Durkee, PhD, PE, and "Cleaning Times" columnist for *Metal Finishing* magazine
- Today's action and other background information are also available electronically at [www.regulations.gov](http://www.regulations.gov), EPA's electronic public docket and comment system. The docket number for this action is Docket ID No. EPA-HQ-OAR-2003-0948.
- For more information on the final rule, contact William L. Johnson at 919-541-5245 or [johnson.williamL@epa.gov](mailto:johnson.williamL@epa.gov).