



Massachusetts
Department
of
ENVIRONMENTAL
PROTECTION

fact sheet

Solvent Metal Degreasing: Regulatory Update

On March 6, 2009, the Massachusetts Department of Environmental Protection (MassDEP) revised its Solvent Metal Degreasing regulation, 310 CMR 7.18(8), to reduce emissions of Volatile Organic Compounds (VOCs) from cold solvent degreasing operations. Cold cleaning degreasers range in size from bench-top units used to degrease small metal parts to industrial-sized cold cleaners. VOCs that evaporate from solvent cleaning operations contribute to air pollution problems such as the formation of ground-level ozone and related public health problems.

New Lower Vapor Pressure Requirement

Effective September 6, 2009, the revised regulation limits the vapor pressure of cold cleaning solvents to 1.0 millimeter mercury (mm Hg) measured at 20° Celsius in all cold cleaning degreasers that can hold more than 1 liter of solvent. In addition, the revised regulation maintains all of the other existing control requirements for cold solvent metal degreasers (e.g., requirements for covers, freeboard ratio, minimizing the air draft across the face of the degreaser, draining of parts, etc.). A copy of the Solvent Metal Degreasing regulation is available at: <http://www.mass.gov/dep/air/laws/regulati.htm>.

Many cold degreasing solvents such as halogenated solvents, alcohols, ketones, naphtha, mineral spirits and Stoddard solvent have higher vapor pressures than that allowed under this regulation. Facilities that use such substances in their cold degreasing operations can comply with the new requirement by:

- Switching to a solvent with a lower vapor pressure that meets the new requirement;
- Utilizing a water-based cleaning system; or
- Installing air pollution controls.

Exemptions

The new vapor pressure requirement does not apply to cold cleaning degreasers that are:

- Used in the following specific solvent metal cleaning operations (defined in the regulation as “Special and Extreme Solvent Metal Cleaning”):
 - Manufacturing and rework of electronic parts, assemblies, boxes, wiring harnesses, sensors and connectors used in aerospace service;
 - Manufacturing of ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds, or oxygen in concentrations greater than 23 percent; and
 - Cleaning of metal parts exposed to ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds, or oxygen in concentrations greater than 23 percent.
- Used in an operation for which MassDEP has received a demonstration that compliance with the vapor pressure requirement will result in unsafe operating conditions, and for which MassDEP has issued an approval.
- Located in a permanent total enclosure containing equipment that is designed and operated to achieve an overall VOC control efficiency of 90 percent or greater.

Permitting Requirements

In general, a MassDEP air permit is required before installing or modifying a solvent metal degreaser if the degreaser has the potential to emit more than one ton of VOC in any 12-consecutive month period. In lieu of a permit, a company can elect to install a new degreaser that uses less than 100 gallons per month of solvent and complies with the new solvent vapor pressure limit. Please contact MassDEP if you need more information on exemptions, compliance options, and/or air permit requirements.

Further Assistance

- The supplier of your cold degreasing solvent may be able to help you identify a compliant low vapor pressure solvent that is suitable for your operation.
- You may also contact the Office of Technical Assistance and Technology (OTA) at 617-626-1060 and/or the Toxics Use Reduction Institute (TURI) at 978-934-3275 or www.turi.org for a free evaluation of your cleaning process and alternative cleaning solvents or processes.
- Please contact your regional MassDEP Office if you have any questions regarding this regulation or your permitting requirements:

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Produced by the
Bureau of Waste Prevention
August 2009
Printed on recycled paper

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