

Requirements of a Methylene Chloride Workplace Chemical Protection Program (WCPP)

Purpose The Environmental Protection Agency, under the Toxic Substances Control Act (TSCA), has ruled that methylene chloride (CAS# 75-09-2, also identified as dichloromethane or DCM) poses an unreasonable risk of injury to human health. This document outlines the requirements for a Workplace Chemical Protection Program for methylene chloride. WCPPs may be established at the lab, department, or institute level.

Definitions, Roles, and Responsibilities

- **As needed monitoring** - Exposure measurements taken when there is a change of use.
- **De minimis** - The threshold concentration below which the regulatory restrictions are not required. For methylene chloride, this concentration is below 0.1% by weight.
- **Exposure Control Plan (ECP)** - This documents actions taken to mitigate occupational exposures and comply with the WCPP.
- **Owners /operators** - Anyone who owns, leases, operates, controls, or supervises a workplace.
- **Periodic monitoring** - Dependent upon the results of the initial and/or repeat monitoring; the frequency for gathering new monitoring data ranges from 3 months to 5 years.
- **Potentially exposed person** - Any person who may be exposed to a chemical or mixture in a workplace as a result of a condition of use of that chemical substance or mixture. This applies to users of the chemical and any other people that may enter a work area where exposure could occur.
- **Prohibited Uses** - the EPA has established exposure limits for methylene chloride for **some** conditions of use, including “use as a laboratory chemical” and “use as a bonding agent for solvent welding.” Nearly all other commercial and industrial uses, such as use as a solvent or paint remover, are prohibited. EPA has a full list of prohibited uses in its [Guide to Complying with the 2024 Methylene Chloride Regulation](#).
- **Regulated area** - An area demarcated where airborne concentrations exceed, or there is a reasonable possibility they may exceed, the Existing Chemical Exposure Limit (ECEL) of 2 parts per million (ppm) or EPA Short Term Exposure Limit (STEL) of 16 ppm.
- **Retailer** - An entity that distributes or makes available products to consumers.
- **Workplace Chemical Protection Program (WCPP)** - A written program to protect potentially exposed persons in the workplace who are engaged in conditions of use that are not prohibited.

WCPP Elements

- 1) **Occupational exposure limits**
 - a) Action Level, 8-hour Time Weighted Average (TWA) - 1 ppm
 - b) Existing Chemical Exposure Limit (ECEL), 8-hour TWA - 2 ppm
 - c) Short Term Exposure Limit (STEL), 15-minute TWA - 16 ppm
- 2) **Monitoring requirements**
 - a) Initial monitoring
 - b) Periodic monitoring
 - i) Required every 3 months if ECEL or STEL are exceeded during initial monitoring.

- ii) Required every 6 months if Action Level is exceeded during initial monitoring.
- iii) Required every 5 years or when conditions of use change if initial monitoring did not exceed any exposure limits listed in section 1.
- c) Sampling requirements
 - i) Must use personal breathing zone sampling.
 - ii) May use similar exposure groups provided the person monitored is the most exposed person.
 - iii) All members of the similar exposure group must have an opportunity to observe the monitoring.
- d) Notification of monitoring results to monitored person and potentially exposed persons (e.g., similar exposure group)
 - i) Within 15 working days after receipt of results.
 - ii) Shared individually or publicly in writing.
 - (1) Individual notices must be in a language the potentially exposed person understands.
 - (2) Public notices must be posted in an accessible location in English and the most-represented non-English language.

3) Regulated areas (if exposure limits are reasonably expected to be exceeded)

- a) Would require respiratory protection sufficient for methylene chloride (i.e., supplied air respirator).
- b) May need to be established for hazardous waste operations (e.g., bulking).

4) Exposure Control Plan

- a) Describe consideration and/or implementation of the following types of controls **in order**:
 - i) Elimination
 - (1) Describe why use of DCM is essential.
 - ii) Substitution
 - (1) Describe inadequacy of available substitutes.
 - iii) Engineering Controls
 - (1) Examples include fume hood, glove box, snorkel, and other closed systems.
 - iv) Administrative Controls
 - (1) Establish standard operating procedures.
 - (a) Require closed containers outside of engineering controls.
 - (2) Access controls and designated storage locations.
 - (3) Procurement controls.
 - (4) Cannot use worker rotation as an administrative control.
 - (5) Can use direct-read monitoring for persons exposed less than 30 days per year.
 - (6) Training (see below).
 - v) Personal Protective Equipment
 - (1) Respiratory protection is not expected to be relevant for research laboratories, but may be required for waste operations and emergency response.
 - (a) Supplied air
 - (2) Dermal protection (Gloves)
 - (a) Polyvinyl alcohol
 - (b) LLDPE
 - (c) Viton
 - (d) Silver Shield
 - (e) Nitrile-double gloved

5) Training prior to initial job assignment

- a) Training consistent with OSHA's Methylene Chloride Standard 1910.1052(l)(1) through (6)
 - i) Understandable to potentially exposed persons.
 - ii) Requirements of OSHA's Methylene Chloride Standard.
 - iii) Where exposures may be above the 8-hour TWA PEL or STEL.
 - iv) Repeated as necessary to maintain requisite knowledge of safe use and handling.
 - v) Updated as conditions of use change.
 - vi) Covers glove selection, use, and disposal if dermal exposure is expected to occur.
 - vii) Covers respirators consistent with OSHA's Respiratory Protection Standard 1910.134(k) if respiratory protection is required.

6) Recordkeeping

- a) Owners/operators must maintain compliance records for 5 years.
 - i) Bills of lading, invoices, and receipts
 - ii) Exposure control and monitoring records
- b) May be electronic or hard copy.
- c) May be stored centrally or dispersed across departments or research groups.
- d) Prescriptive and detailed requirements of recordkeeping of monitoring events.
- e) Users must maintain records that prove compliance with the rule.
 - i) Laboratory inspections
 - ii) Ventilation device (e.g., fume hood) maintenance and certification

Timeline for Compliance

- By May 5, 2025, complete initial monitoring.
 - Within 15 days of monitoring, notify monitored persons and similar exposure group(s) of the results.
 - Within 90 days of monitoring, provide any required PPE and establish any regulated areas.
- By October 30, 2025, write and implement the Exposure Control Plan(s) for uses that may continue under a WCPP.
- By April 28, 2026, cease use and dispose of methylene chloride for prohibited uses.

References

- [A Guide to Complying with the 2024 Methylene Chloride Regulation](#)
- [Ansell Chemical Glove Resistance Guide](#)
- [EPA Fact Sheet: Methylene Chloride or Dichloromethane](#)
- [FACT SHEET: 2024 Final Risk Management Rule for Methylene Chloride under TSCA](#)
- [Methylene Chloride Hazards for Bathtub Refinishers](#)
- [Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Methylene Chloride](#)
- [Risk Evaluation for Methylene Chloride](#) - See Appendix F for details on glove materials