Environmental Health and Safety
Guidance Document
TSCA Dichloromethane Rule

In May of 2024, the United States Environmental Protection Agency (EPA) passed a measure through the Toxic Substances and Control Act (TSCA) banning most uses of dichloromethane. EPA has included provisions for limited use, but this is restricted to most lab uses, and solvent welding for non-lab users. On November 13, 2025, EPA extended the deadlines for compliance, see below for the updated compliance dates.

Timeline for compliance:

- **November 9, 2026** (previously May 5, 2025): initial monitoring of labs that use DCM must be complete.
    - Within 15 days of monitoring, monitored persons and similar exposure groups will be notified of the results.
    - Within 90 days of monitoring, any required PPE will be provided, and any regulated areas (if applicable) will be established.
- **February 8, 2027** (previously August 1, 2026): Labs must establish regulated areas for DCM usage (if applicable) and ensure compliance with the existing chemical exposure limits.
- **May 10, 2027** (previously October 30, 2025): Labs must establish complete an Exposure Control Plan(s) (ECP) for uses that may continue under the Workplace Chemical Protection Plan (WCPP).

What is dichloromethane?

Dichloromethane, also known as DCM or methylene chloride, is commonly used as a laboratory solvent, and commercially used as a paint stripper, degreasing agent, metal cleaner, etc. Other names for dichloromethane include, but are not limited to, methylene bichloride, methylene dichloride, Solmethine, Narkotil, Freon-30, etc.

Why dichloromethane?

In 2020 the EPA began reviewing the risks associated with using DCM. This included looking at toxicological properties, use across all industries, reviewing accident histories, etc. The agency finalized its risk assessment in 2022 and decided that DCM had an unreasonable amount of risk given its prevalence and use by workers across various industries, namely due to its neurotoxicity. In May of 2024, EPA released its “Final Management Rule for Methylene Chloride” under TSCA.

Toxicological and chemical properties:





Dichloromethane causes skin irritation, serious eye irritation, may cause drowsiness or dizziness upon exposure, and is classified by the International Agency for Research on Cancer (IARC) as Group 2A, Probably Carcinogenic to Humans, and by the National Toxicology Program (NTP) as a substance that is Reasonably Anticipated to be a Human Carcinogen: specific target organ toxicity, single exposure – central nervous system.

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Where can dichloromethane be found?

Lab uses for DCM include:

- Use as a solvent or reagent
- Chromatography eluent
- Solvent welding (for acrylic, etc.)
- Roto-evaporation units
- Histology and tissue preparation
- Polymer and resin processing (e.g., polymerization solvent, resin dissolution)
- Degreasing and cleaning

Non-lab uses for DCM include:

- Paint strippers and removers
- Solvent-based paints and coatings
- Solvent welding (for acrylic, etc.)
- Adhesives and adhesive removers
- Degreasing and cleaning
- Automotive products
- Engine cleaners
- Brake cleaners
- Lubrication oil
- Lithography/printmaking products
- Heavy-duty or specialized cleaners
- Select herbicides

If you are uncertain if a product your area uses contains DCM, check the Safety Data Sheet (SDS) for that product. The new ruling only applies to products and mixtures containing >0.1% DCM.

What does this mean for users?

All groups must complete the Dichloromethane Usage Survey if your area is currently using DCM. This ensures EHS is aware of your use and allows EHS to work with your lab to ensure compliance with this new regulation.

Labs currently using DCM are strongly encouraged to find alternatives. A sample list with literature references can be found in the DCM Alternative Solvents Guidance document. Substitutions for DCM should not be with more toxic chemicals (e.g. benzene or 1,4-dioxane, etc.) or with other chlorinated solvents (e.g. trichloroethylene, carbon tetrachloride, etc.), as some other chlorinated solvents (such as trichloroethylene) are already or will soon be added to the EPA list of highly restricted solvents.

Non-lab areas that use greater than 0.1% solutions of DCM for solvent welding must fill out the Dichloromethane Use Survey to ensure that EHS is aware of your use and allow EHS to collaborate with you to ensure compliance with this new regulation. Any other use of DCM must

stop, and alternatives must be found. Any containers on hand should be submitted to EHS as hazardous waste.

What is required?

Any area that chooses to continue to use DCM and cannot find alternatives must comply with the following:

- Perform air monitoring for those processes and tasks that use DCM in conjunction with EHS. Each area must schedule a time for air monitoring with EHS. Results of monitoring will determine any necessary corrective action(s) to ensure that the task is performed within proper exposure control parameters.
- Write an SOP for each task. A template specific to DCM can be found on the EHS Guidance Sheets page.
- Insert the Workplace Chemical Protection Plan (WCPP), available from EHS, into your Lab Safety or HazCom binder, whichever is applicable.

Any products/solutions of DCM can be submitted as a hazardous waste through the Chemical Waste Collection Request form.

New exposure limits:

OSHA uses a Time-Weighted Average (TWA) to determine the maximum amount that an employee may be exposed to during an 8-hour period. This is equivalent to EPA's ECEL (Existing Chemical Exposure Limit), with the noted exception that the TSCA ECEL applies to all persons exposed, not just employees (e.g. students, visitors, etc.). The Short-Term Exposure Limit (STEL) represents the maximum that a person may be exposed in a 15-minute period.

	EPA Limits	OSHA Limits
8-hour TWA/ECEL:	**2 ppm**	25 ppm
15-min STEL:	**16 ppm**	125 ppm

The odor threshold ranges from 25 ppm to 250 ppm, so users cannot rely on the odor of the chemical to determine safe exposure.

What will exposure monitoring entail?

Areas that use DCM should provide a list to EHS of each task performed using DCM. Monitoring will be conducted on a per-task basis, but only one person needs to be monitored even if more than one person in the area performs the specific task (e.g., only one person needs monitored even if multiple people perform extraction using DCM in a fume hood).

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Monitoring entails wearing two badges on the person being monitored, usually on the collar of a lab coat, work uniform or shirt. One badge will be worn by the monitored individual for the full 8-hour workday, even while the individual is not in the work area (e.g., a personal office area). The same individual will wear the second badge for 15 minutes while the task that uses DCM is being performed. At the end of the day, EHS will collect the badges.

Monitoring may be conducted over multiple days if there are additional tasks that use DCM.

After monitoring is completed and the badges are analyzed, the results of the monitoring will be communicated within 15 days to any potentially exposed persons.

Periodic monitoring requirements based on initial exposure monitoring results:
The table below, from the EPA, lists subsequent monitoring requirements based on the results of initial task monitoring.

DCM Concentration (exposure monitoring results)			Re-monitoring Frequency
8-hr TWA (ECEL)		15-min TWA (STEL)	
< 1 ppm	and	≤ 16 ppm	ECEL and STEL periodic monitoring at least once every 5 years
< 1 ppm	or	> 16 ppm	ECEL monitoring at least once every 5 years AND STEL periodic monitoring required every 3 months
1 ppm - 2 ppm	or	< 16 ppm	ECEL monitoring every 6 months
1 ppm - 2 ppm	or	> 16 ppm	ECEL periodic monitoring every 6 months AND immediate suspension of tasks causing the 15-min TWA to exceed 16 ppm in the monitored lab
> 2 ppm	or	Any value	Immediate suspension of use of DCM in the monitored lab

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Additional resources:

- Federal Register - Methylene Chloride Compliance Deadline Extension
- Federal Register - Methylene Chloride Final Rule
- EPA - Methylene Chloride Fact Sheet
- EPA - Methylene Chloride Compliance Guide