

# Trichloroethylene (TCE)

## What is Trichloroethylene?

Trichloroethylene (TCE) is primarily used in the manufacture of refrigerants and other chemicals and can be an effective extraction solvent for greases, oils, fats, waxes and tars and has been used in the textile processing industry to scour cotton, wool and other fabrics.



## What are the critical uses of TCE?

TCE has extensive application as a metal degreaser and a chemical intermediary in various industries. It serves as a solvent in metal processing, electronics, printing, pulp and paper, as well as textile sectors. The following are examples of key industries and applications that our economy and national priorities rely on:



**Aerospace** – TCE is used by many industries, including aerospace, automotive, and household appliance production in vapor degreasing for metal parts to remove soil and metal chips during fabrication.



**Refrigerants** – TCE is used as a feedstock in the manufacture of mobile air refrigerants and other fluorinated chemical compounds.



**Furniture and Automotive Care** – TCE has been used in cleaning and furniture care products, arts and crafts spray coatings, and automotive care products like brake cleaners, and other consumer products.



**Textiles** – TCE can be an effective extraction solvent for greases, oils, fats, waxes and tars and has been used in the textile processing industry to scour cotton, wool and other fabrics.



**Painting** – TCE works as a solvent for extraction, waterless drying and finishing, and as a general-purpose solvent in adhesives, lubricants, paints, varnishes, paint strippers, pesticides, and cold metal cleaners.

## What should policymakers know about TCE?

The Environmental Protection Agency (EPA)'s 2024 risk management rule for TCE under the Toxic Substances Control Act (TSCA) prohibits most uses of TCE within one year while providing extended timelines of up to 10 years for essential applications, such as refrigerant manufacturing and uses critical to national security.

The final rule allows for the continued on-site reuse of TCE byproducts in enclosed-loop chemical manufacturing processes. However, it prohibits inter-facility transfers of these byproducts even when exposure controls are in place, effectively limiting long-standing reuse practices. Additionally, the rule prohibits the discharge of any amount of TCE in wastewater, regardless of concentration, even when such discharges are authorized under valid Clean Water Act NPDES permits. This imposes a de facto zero-liquid-discharge requirement, with significant implications for facility operations and wastewater management.

Moving forward, it is critical that EPA provide clear, timely implementation guidance to support effective industry compliance while ensuring protections for human health and the environment.

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## Is TCE regulated?

TCE is well regulated under multiple federal laws due to its health and environmental risks. The EPA oversees its use and disposal through TSCA, the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Safe Drinking Water Act, and the Comprehensive Environmental Response, Compensation, and Liability Act—covering air emissions, water discharges, hazardous waste management, drinking water limits, and cleanup of contaminated sites.