

M A T E R I A L S A F E T Y D A T A S H E E T

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24-Hour Emergency Phone Number: 517-636-4400

Product: TETRACHLOROETHANE

Product Code: 85808

Effective Date: 07/19/96 Date Printed: 08/08/96 MSD: 003367

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

1. INGREDIENTS: (% w/w, unless otherwise noted)

1,1,2,2-Tetrachloroethane	CAS# 000079-34-5	55%
1,1,1,2-Tetrachloroethane	CAS# 000630-20-6	40%
Pentachloroethane	CAS# 000076-01-7	3%
1,1,2-Trichloroethane	CAS# 000079-00-5	2%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: 266F, 130C
VAP. PRESS: 8 mmHg @ 20C
VAP. DENSITY: (Air=1): 4.7
SOL. IN WATER: Insoluble
SP. GRAVITY: 1.57
APPEARANCE: Colorless Liquid
ODOR: Sweetish suffocating chloroform-like odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: None
METHOD USED: TCC

FLAMMABLE LIMITS
LFL: None
UFL: None

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

EXTINGUISHING MEDIA: Non-flammable material.

FIRE AND EXPLOSION HAZARDS: No autoignition temperature.

FIRE-FIGHTING EQUIPMENT: Wear full protective clothing and positive pressure self-contained breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID): Stable

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID): Amines and aluminum and its alloys.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Small spills: Mop up or wipe up immediately. Remove to out of doors. Large Spills: Evacuate area. Contain liquid. Use absorbant material/sand and place in closed containers. Keep out of water supply. Contact The Dow Chemical Company.

DISPOSAL METHOD: When disposing of unused contents, the preferred options are to send to licensed reclaimers or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local laws and regulations. Do not dump into sewers, on the ground, or into any body of water.

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6. HEALTH HAZARD DATA:

EYE: May cause moderate irritation with corneal injury. Vapors may irritate eyes. Vapors may cause lacrimation (tears).

SKIN CONTACT: Prolonged or repeated exposure may cause skin irritation, even a burn. May cause drying or flaking of skin. May rarely cause an allergic skin response.

SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. Repeated skin exposure may result in absorption of amounts which could cause death. The dermal LD50 has not been determined.

INGESTION: Single dose oral toxicity is moderate. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of larger amounts could cause serious injury, even death. If aspirated (liquid enters the lung), may be rapidly absorbed through the lungs and result in injury to other body systems. Single dose oral LD50 has not been determined.

INHALATION: Excessive vapor concentrations are readily attainable and may cause serious adverse effects, even death. Signs and symptoms of excessive exposure may be central nervous system effects and gastrointestinal irritation. Based on structural analogy and/or equivocal data on animals, excessive exposure may potentially increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). A single excessive exposure may cause respiratory irritation, liver and kidney effects. Alcohol consumed before or after exposure may increase adverse effects.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Repeated excessive exposures may cause liver, lung and kidney effects. Excessive exposure may cause peripheral neuropathy (injury to nerves of the extremities). Signs and symptoms of excessive exposure may be central nervous system effects. Observations in animals

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6. HEALTH HAZARD DATA: (CONTINUED)

include blood effects.

CANCER INFORMATION: The major components have been shown to cause cancer in laboratory animals. Available data are inadequate to evaluate carcinogenicity of the minor components.

TERATOLOGY (BIRTH DEFECTS): Though available data suggest that this material may have caused fetotoxic effects in animals, evidence is inadequate to evaluate potential to birth defects.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results of in vitro (test tube) mutagenicity tests have been inconclusive for the 1,1,2,2-tetrachloroethane component. Other components have been shown to be negative in some in vitro (test tube) mutagenicity tests and positive in others.

7. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation persists. Wash clothing before reuse. Destroy contaminated shoes.

INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of

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7. FIRST AID: (CONTINUED)

whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. Repeated excessive exposure may aggravate preexisting liver disease. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs unless absolutely necessary.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): 1,1,2,2-Tetrachloroethane: Dow IHG is 0.1 ppm, Skin. ACGIH TLV and OSHA PEL are 1 ppm, Skin. ACGIH classifies as A4.

1,1,2-trichloroethane: ACGIH TLV is 10 ppm, skin, A3; OSHA PEL is 10 ppm, skin.

1,1,1,2-Tetrachloroethane: Dow IHG is 0.1 ppm.

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize the dermal exposures should be considered.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Lethal concentrations may exist in areas with poor ventilation.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved positive-

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8. HANDLING PRECAUTIONS: (CONTINUED)

pressure supplied-air respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved positive-pressure supplied-air respirator.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on operation. Use gloves, impervious to this material, at all times. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. Contaminated leather items, such as shoes, belts and watchbands, should be removed and destroyed.

EYE PROTECTION: Use chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid eye and skin contacts and breathing of vapors. Store in a cool, dry place. Aluminum is not an acceptable material of construction for pumps, mixers, fittings, storage tanks, delivery tanks.

MSDS STATUS: Revised Section 8 (Dow IHG).

For information regarding state/provincial and federal regulations see the Regulatory Information Section.

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