

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

Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 14728 Page: 1

PRODUCT NAME: CARBON TETRACHLORIDE, TECHNICAL

Effective Date: 02/07/90 Date Printed: 02/13/90 MSDS:000097

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

Carbon tetrachloride CAS# 000056-23-5 99.8%

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: 170F (76.5C)
VAP. PRESS: 91 mmHg @ 20C
VAP. DENSITY: 5.31
SOL. IN WATER: 0.08 g/100g
SP. GRAVITY: 1.589 @ 25/25C
APPEARANCE: Colorless liquid.
ODOR: Sweetish, distinctive odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: None
METHOD USED: TCC

FLAMMABLE LIMITS
LFL: Not applic.
UFL: Not applic.

EXTINGUISHING MEDIA: Non-combustible.

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

FIRE & EXPLOSION HAZARDS: Has no ignition temperature.

FIRE-FIGHTING EQUIPMENT: Positive-pressure self-contained breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Avoid open flames, welding arcs, or other high temperature sources which induce thermal decomposition.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing material. Contact with aluminum or other easily oxidized non-ferrous metals.

HAZARDOUS DECOMPOSITION PRODUCTS: Involvement in fire forms hydrogen chloride and phosgene gas.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Remove all unnecessary personnel from the area. Ventilate closed areas thoroughly. Small spills - mop up, wipe up or soak up immediately. Large spills - contain liquid; transfer to closed metal containers. Keep out of water supply.

DISPOSAL METHOD: When disposing of unused contents, the preferred options are to send to licensed reclaimer, or to permitted incinerators. Any disposal practice must be in

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5. ENVIRONMENTAL AND DISPOSAL INFORMATION: (CONTINUED)

compliance with federal, state, and local regulations. Do not dump into sewers, on the ground, or into any body of water.

6. HEALTH HAZARD DATA:

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors may irritate eyes.

SKIN CONTACT: Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. Repeated contact may cause drying or flaking of skin.

SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. May cause more severe response if skin is abraded (scratched or cut). The LD50 for rabbits is 1800 mg/kg.

INGESTION: Single dose oral toxicity is moderate. The LD50 for rats is 2920 mg/kg. If aspirated (liquid enters the lung), may be rapidly absorbed through the lungs and result in injury to other body systems. Human experience indicates a mean lethal dose is in the range of 5 to 10 ml for the average adult.

INHALATION: Excessive vapor concentrations are readily attainable and may cause unconsciousness and death. The LC50 for rats is 6200 ppm in 4 hours. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). One-tenth saturated atmosphere is lethal to rats in 15 minutes. High concentrations can lead to unconsciousness; lower concentrations may cause headaches, dizziness, incoordination and other central

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6. HEALTH HAZARD DATA: (CONTINUED)

nervous system effects, as well as irritation to the upper respiratory tract.

SYSTEMIC & OTHER EFFECTS: A single excessive exposure may cause central nervous system, liver and kidney effects. Repeated excessive exposures to high amounts may cause liver, kidney, CNS and gastrointestinal effects. Repeated excessive exposures to smaller amounts may cause liver more likely than kidney effects. Alcohol consumed before or after exposure may increase adverse effects. For hazard communication purposes under OSHA Standard 29 CFR Part 1910.1200, this chemical is listed as a potential carcinogen by NTP, IARC. Has been shown to produce liver tumors in some laboratory animals. Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother. In animal studies, has been shown not to interfere with reproduction. Results of in vitro ("test tube") mutagenicity tests have been negative.

7. FIRST AID:

EYES: Irrigate immediately with water for at least 5 minutes.

SKIN: Wash off in flowing water or shower. Remove contaminated clothing and air thoroughly before reuse.

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

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

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7. FIRST AID: (CONTINUED)

oxygen. Call a physician.

NOTE TO PHYSICIAN: Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by an attending 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. Exposure may induce myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): OSHA PEL is 2 ppm; ACGIH TLV is 5 ppm, A2, Skin.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: Use an approved air-purifying respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.

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8. HANDLING PRECAUTIONS: (CONTINUED)

EYE PROTECTION: Use safety glasses. Where contact with liquid is likely, chemical goggles are recommended because eye contact with this material may cause discomfort, even though it is unlikely to cause injury.

9. ADDITIONAL INFORMATION:

REGULATORY REQUIREMENTS:

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A delayed health hazard

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains a chemical(s) known to the State of California to cause cancer.

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Vapors of this product are heavier than air and will collect in low areas. Avoid pits, depressions, basements, and confined spaces where vapors may accumulate. Strong consideration should be given to air monitoring system where material is stored and handled routinely. Do not breathe vapors. Avoid eye and prolonged or repeated skin contact.

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9. ADDITIONAL INFORMATION: (CONTINUED)

MSDS STATUS: Revised Section 2.

SARA 313 INFORMATION:

This product contains the following substances subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
CARBON TETRACHLORIDE	000056-23-5	99.8 %

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