CARBON TETRABROMIDE

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY.

Product Name
Carbon Tetrabromide
Formula
CBr₄
Company Identification
See footer.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation
Carbon Tetrabromide
Components/Impurities
None
EC No.
209-189-6
CAS No.
558-13-4

3. HAZARDS IDENTIFICATION

Poisonous solid. Fumes may cause skin, eye and respiratory irritation. Avoid inhalation of fumes.

4. FIRST AID MEASURES

Prompt medical attention is required in all cases of exposure to carbon tetrabromide and its by-products. Rescue personnel should be equipped with appropriate protective equipment (e.g. Self-contained breathing apparatus) to avoid unnecessary exposure and must be aware of the poisonous nature of carbon tetrabromide.

Skin
In case of contact Immediately remove contaminated clothing, and excess material off skin if not stuck to skin then wash affected area with plenty of water. Obtain medical attention.

Eyes
In case of contact Immediately flush with running water for at least 15 minutes. Hold eyelids open to ensure complete flushing.

Inhalation
Move exposed personnel to an uncontaminated area wearing breathing apparatus. If breathing is difficult, give oxygen. If breathing has stopped, apply artificial respiration. Medical assistance should be sought immediately. Keep victim warm and quiet.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Always use dry powder or lime. Never use water, foam or halogenated compounds. Without risk, stop flow of compound to fire. Without risk, and if safe to do so, move container(s) away from the fire area.

Exposure Hazards
Toxic fumes of CO, CO₂, HBr gas
Special Protective Equipment for Fire-Fighters
Self-contained breathing apparatus, face shield and safety goggles, safety shoes and fire resistant gloves.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Evacuate area. Use appropriate protective equipment. Purge equipment with inert gas before attempting repairs. Ensure adequate ventilation. If leak is in container call one of the emergency numbers as appropriate (See footer).

Environmental Precautions
Try to stop release, if safe to do so. Prevent from entering sewers or waterways. For fire fighting measures see Section 5.

Clean up methods
Contact Epichem for specific advice.

7. HANDLING AND STORAGE

Handling
Valve outlet seals must remain in place unless container is secured and valve outlet piped to use point. Use a check valve or trap to prevent hazardous back flow into the container. Any equipment used for carbon tetrabromide service must be thoroughly cleaned and prepared to eliminate contamination and must be maintained in a leak free state. All air and moisture in the system must be eliminated before use.

Storage
Protect containers from physical damage. Do not allow temperatures to exceed (125°F) 51°C. Store away from flammable material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Controls
OSHA or ACGIH:
TLV(TWA)= 0.1 ppm (1.4 mg/m³)
TLV(STEEL)= 0.3 ppm (4.1 mg/m³)

OES and MEL:
Long term exposure limit (8-hour TWA reference period) 0.1 ppm 1.4 mg/m³.
Short term exposure limit (15-minute TWA reference period) 0.3 ppm 4 mg/m³.

Ensure adequate ventilation.

Personal Protection
Self-contained breathing apparatus, rubber gloves, face shield and safety goggles, safety shoes and fire-resistant garments. Safety shower and eye wash.
SAFETY NOTICE: In Order to provide our customers with the highest quality material and maintain our high standards of safety, the surface temperature of the bubbler will be monitored during the transportation of our products. We would like to monitor the surface temperature of the bubbler using a tempilabel. Tempilabel is a temperature-monitoring strip ranging from 120F to 150F (49C to 66C) which will indicate the temperature during shipment. If the temperature monitor is changed, please notify an Epichem representative immediately and we will assist you in the proper measures to be taken. We ask for your cooperation in our efforts of quality assurance and safety. If you have any questions or comments, please contact an Epichem representative. We thank you for your cooperation. Your assistance is greatly appreciated.

Information contained in this material safety data sheet is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this Company or others covering any process, composition of matter or use.

Since the Company shall have no control of the use of the product described herein, the company assumes no liability for loss or damage incurred from the proper or improper use of such product.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: (374F) 190C
Melting point; (190-194F) 88-90C
Vapor Pressure: Log P (mmHg) = 7.78 – 2346/T (K)
Density: 3.42 g/ml
Molecular Weight: 331.6 grams
Solubility in water: Negligible.
Appearance and Odor: White crystalline solid

10. STABILITY AND REACTIVITY

Conditions to avoid
None
Note: Carbon Tetrabromide is stable indefinitely in an inert atmosphere at room temperature.

Materials to avoid
Strong oxidizing agents and strong bases.

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide, HBr gas

11. TOXICOLOGICAL INFORMATION

Irritating to skin, eyes and respiratory tract. Irritating mucous membranes. Narcotic in high concentrations. Possible liver and kidney damage.
Toxicity SCU-MUS LD50 298 mg/kg
IVN-MUS LD50 56 mg/kg

Carbon Tetrabromide is not listed in the IARC, NTP or OSHA Subpart Z as a carcinogen or potential carcinogen.

This product is listed on the TSCA inventory

12. ECOLOGICAL INFORMATION

Does not contain any Class I or Class II ozone depleting chemicals.

13. DISPOSAL CONSIDERATIONS

Regional and National regulations should be followed during waste disposal. Contact an Epichem representative for disposal of container and any unused quantities.

14. TRANSPORT INFORMATION

UN No: 2516
CLASS: 6.1
PG III
ECCN#: EAR99
IMDG Code: 6096
Marine Pollutant
Shipping Name: Carbon Tetrabromide

15. REGULATORY INFORMATION

Classification
Toxic, Dangerous for the environment
Risk and Safety Phrases
R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
R52: Harmful to aquatic organisms.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S38: In case of insufficient ventilation wear suitable respiratory equipment.
S60: This container must be disposed of as hazardous waste.

16. OTHER INFORMATION

Ensure operators understand the toxic nature of the product. Before using this product, it is recommended that a risk assessment and safety study be carried out. Further information on the use of this product can be obtained from the Technical Product Manager at the nearest Epichem facility.