



MATERIAL SAFETY DATA SHEETS

109

Carbon tetrachloride

1. CHEMICAL IDENTITY

Chemical Name : Carbon tetrachloride

Chemical Classification: Toxic

Trade Name :

Synonyms: Tetrachloromethane, Tetrachlorocarbon, Tetra carbon chloride, Perchloro methane, Benzinofom

Formula : CCl₄

CAS No: 56-23-5

UN No: 1846

Regulated Identification

Shipping Name : Carbon tetrachloride

Hazchem Code : 2Z

Codes / Label : Class 6.1, Toxic

Hazardous Waste ID No :

| HAZARDOUS INGREDIENTS | C.A.S. No. | HAZARDOUS INGREDIENTS | C.A.S. No. |
|-----------------------|------------|-----------------------|------------|
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|---|----------------------|---------|---|
| 1 | Carbon tetrachloride | 56-23-5 | 3 |
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2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C: 76.7

Physical State: Liquid

Appearance: A clear colorless liquid

Melting Pt °C: -23

Vapour Pressure @ 35°C mmHg: 115 mm Hg at 25 deg C

Odour: Chloroform-like odor.

Vapour Density(Air =1): 5.3

Solubility in water at 30°C g/100ml: 0.1 g/100ml

Others:

Specific Gravity (Water =1): 1.5940 @ 20 deg C/4 deg C

pH : Neutral

3. FIRE / EXPLOSION HAZARD DATA

Flammability : No

LEL:

Flash Point °C in OC:

TDG Flammability:

UEL:

Flash Point °C in CC:

Autoignition Temperature °C :

Explosion sensitivity to impact: Stable

Explosion sensitivity to static Electricity: Stable

Hazardous Combustion Products : Forms poisonous phosgene gas when exposed to open flames.

Hazardous Polymerization :

Combustible Liquid:

Explosive Material:

Corrosive Material

Flammable Material:

Oxidiser :

Others:

Pyrophoric Material:

Organic Peroxide :

4. REACTIVITY DATA

Chemical Stability : Stable under normal temperatures and pressures.

Incompatibility with other material : Aluminum, bromine trifluoride, calcium hypochlorite, dimethyl formamide, ethylene oxide, fluorine, lithium, magnesium, potassium, potassium-tert-butoxide, silver perchlorate, sodium, uranium, chlorine trifluoride, dinitrogen tetroxide, methanol.

Reactivity :
Hazardous : Hydrogen chloride, chlorine, phosgene, carbon monoxide, carbon
Reaction Products dioxide.

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, Ingestion, Skin and Eyes

Effects of Exposure / Symptoms:

Inhalation : May cause liver and kidney damage. May cause adverse central nervous system effects including headache, convulsions, and possible death. May cause heart disturbances, possibly leading to cardiac arrest and death. May cause liver abnormalities. May cause cardiac abnormalities. Ingestion : Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause tremors and convulsions. May cause effects similar to those of acute inhalation. Substance is a hepatotoxin and is capable of producing a toxic effect on the liver. Skin : May cause skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. Eye : May cause eye irritation. May cause temporary visual impairment.

Emergency Treatment :

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

LD50 (oral-rat) mg/kg: 2920 mg/kg

STEL: 10 ppm

LC50 (rat) mg/kg:

Odour Threshold: 21.4 ppm

Permissible Exposure Limit: 10 ppm

TLV (ACGIH) : 5 ppm

| NFPA Hazard | Health | Flammability | Reactivity | Special |
|-------------|--------|--------------|------------|---------|
| Signals | 3 | 0 | 0 | |

6. PREVENTIVE MEASURES

Personal Protective Equipment : Eyes: Wear appropriate protective eyeglasses or chemical safety goggles. Skin: Wear PVC gloves, apron, and/or clothing.

Handling : Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood.

Storage : Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store near alkaline substances.

Precautions :

7. EMERGENCY / FIRST AID MEASURES

FIRE:

Fire Extinguishing Media : Extinguish fire using agent suitable for surrounding fire.

Special Procedure : When fighting a fire in which carbon tetrachloride is involved, wear self-contained breathing apparatus. Use water spray to keep fire-

exposed containers cool.

Unusual Hazards :

EXPOSURE: First Aid Measures:

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Antidotes / Dosages:

SPILLS :

Steps To Be Taken : Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Avoid runoff into storm sewers. Remove all sources of ignition. Provide ventilation. Do not get water inside containers.

Waste Disposal Method:

8. ADDITIONAL INFORMATION / REFERENCES

9. MANUFACTURERS / SUPPLIERS DATA

NAME OF FIRM :

Contact person

MAILING ADDRESS :

in Emergency :

TELEPHONE / TELEX NOS :

Local Bodies involved :

TELEGRAPHIC ADDRESS :

Standard Packing :

OTHERS :

Trem Card Details / Ref :

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