



MATERIAL SAFETY DATA SHEET

CARBON TETRACHLORIDE

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:

Carbon Tetrachloride

Catalog Numbers:

AC148170000, AC148170010, AC148170025, AC148170250, AC167720000, AC167720010, AC167720025, AC167720100, AC167721000, AC167725000, AC258530000, AC258530010, AC258530025, AC269370000, AC269370010, AC269371000, AC600220000, AC600220010, AC600220025, AC600230000, AC600230010, AC600230025, C-199, C187-4, NC9267677, XXAC14817FB200

Synonyms:

Tetrachloromethane; Carbon tet; Carbona; Carbon chloride; Methane tetrachloride.

Company Information:

LEONID CHEMICALS

62/A-2 1st Stage, Yeshwanthpur Industrial Suburb

Ashokpuram School Road

Bangalore-560 022, Karnataka, INDIA

Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	56-23-5
Chemical Name	:	Carbon tetrachloride
%	:	99-100 %
EINECS#	:	200-262-8
Hazard Symbols	:	Un Listed
Risk Phrases	:	Un Listed

SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance:

clear, colorless liquid.

Danger! May be fatal if inhaled, absorbed through the skin or swallowed. Causes eye and skin irritation. Causes severe respiratory tract irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. Cancer suspect agent. May cause central nervous system effects. May cause liver and kidney damage.

Target Organs:

Kidneys, central nervous system, liver.

Potential Health Effects

Eye:

Causes eye irritation. Vapors cause eye irritation.

Skin:

Causes skin irritation. May be absorbed through the skin in harmful amounts. Contact with the skin defats the skin.

Ingestion:

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. Substance is a hepatotoxin and is capable of producing a toxic effect on the liver.

Inhalation:

May cause liver and kidney damage. Exposure produces central nervous system depression. May be harmful if inhaled.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. Chronic ingestion may cause effects similar to those of acute ingestion. May cause liver and kidney damage. May cause cancer according to animal studies. Chronic exposure may cause visual disturbances. Carbon tetrachloride is a CNS depressant.

SECTION 4- FIRST AID MEASURES

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse

Ingestion:

Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation:

POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Treat symptomatically and supportively.

SECTION 5- FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Material will not burn. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Extinguishing Media:

Use extinguishing media most appropriate for the surrounding fire.

Flash Point : Not applicable.

Autoignition Temperature : Not applicable.

Explosion Limits, Lower : Not available.

Upper : Not available.

NFPA Rating : (estimated) Health: 3; Flammability: 0; Instability: 0

SECTION 6- ACCIDENTAL RELEASE MEASURES

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Isolate area and deny entry. Provide ventilation.

SECTION 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Do not breathe vapor. Use only with adequate ventilation.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use only under a chemical fume hood.

Exposure Limits :

Chemical Name	:	Carbon tetrachloride
ACGIH	:	5 ppm TWA; 10 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route
NIOSH	:	200 ppm IDLH
OSHA - Final PELs	:	10 ppm TWA; 25 ppm Ceiling

OSHA Vacated PELs:

Carbon tetrachloride: 2 ppm TWA; 12.6 mg/m³ TWA

Personal Protective Equipment

Eyes:

Wear chemical splash goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Liquid
Appearance	:	clear, colorless

Odor	:	chloroform-like
pH	:	Not available.
Vapor Pressure	:	91 mm Hg @ 20 deg C
Vapor Density	:	5.31 (air=1)
Evaporation Rate	:	12.8 (butyl acetate=1)
Viscosity	:	0.97 PAS 20 deg C
Boiling Point	:	76 deg C @ 760 mm Hg
Freezing/Melting Point	:	-23 deg C
Decomposition Temperature	:	> 100 deg C
Solubility	:	Insoluble.
Specific Gravity/Density	:	1.5900 g/cm ³
Molecular Formula	:	CCl ₄
Molecular Weight	:	153.82

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Light, excess heat.

Incompatibilities with Other Materials:

Alkali metals, powdered aluminum, powdered magnesium, zinc powder, ethylene, allyl alcohol, barium, fluorine, dimethylformamide, powdered beryllium, decaborane, potassium tert-butoxide.

Hazardous Decomposition Products:

Hydrogen chloride, chlorine, phosgene, carbon monoxide, carbon dioxide, chlorine dioxide, which may be spontaneously explosive.

Polymerization:

Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 56-23-5: Fg4900000

LD50/LC50:

CAS# 56-23-5:

Dermal, guinea pig: LD50 = >9400 uL/kg;

Draize test, rabbit, eye: 2200 ug/30S Mild;

Draize test, rabbit, eye: 500 mg/24H Mild;

Draize test, rabbit, skin: 4 mg Mild;

Draize test, rabbit, skin: 500 mg/24H Mild;

Inhalation, mouse: LC50 = 9526 ppm/8H;

Inhalation, mouse: LC50 = 34500 mg/m³/2H;

Inhalation, rat: LC50 = 8000 ppm/4H;

Inhalation, rat: LC50 = 46000 mg/m³/6H;

Oral, mouse: LD50 = 7749 mg/kg;

Oral, rabbit: LD50 = 5760 mg/kg;

Oral, rat: LD50 = 2350 mg/kg;

Skin, rabbit: LD50 = >20 Carbon tetrachloride is harmful to the liver and a CNS depressant following short-term inhalation, skin contact or ingestion. The liver effects have been observed at concentrations lower than those required to produce CNS effects. Two reviews indicate that ingestion of 14-20 ml or 50-150 ml could be fatal. Although, 1.5 ml (34 mg/kg) has caused death in a few cases.

Carcinogenicity:

CAS# 56-23-5:

ACGIH : A2 - Suspected Human Carcinogen
California : carcinogen, initial date 10/1/87
NTP : Suspect carcinogen
IARC : Group 2B carcinogen

Epidemiology :
No data available.

Teratogenicity:
Animal studies have only shown harmful effects in the offspring of animals exposed to doses which also produced significant maternal toxicity.

Reproductive Effects:
Here is no human information available. There is insufficient animal information available to draw any conclusions about potential reproductive toxicity.

Mutagenicity:
No data available.

Neurotoxicity:
No data available.

Other Studies:
Un Listed

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:
Fish: Fathead Minnow: LC50 = 20.8-41.4 mg/L; 96 Hr.; Flow-through; 21.7 degrees C
Bluegill/Sunfish: LC50 = 27-125 mg/L; 96 Hr.; Static Conditions; 23 degrees C
Bacteria: Phytobacterium phosphoreum: EC50 = 6.0 mg/L; Not available; Microtox test
Bacteria: Phytobacterium phosphoreum: EC50 = 33.0 mg/L; 30 minutes; Microtox test
No data available.

Environmental:
Terrestrial: Evaporates rapidly and migrates into groundwater. Aquatic: Rapidly evaporates, biodegradation an important fate process.

Physical:
Atmospheric: Very stable in troposphere with a residence time of 30-50 years.

Other:
Carbon tetrachloride has a low potential to bioconcentrate. Log of the bioconcentration factor in trout is 1.24, in bluegill sunfish - 1.48. Bioconcentration factor predicted from water solubility = 14. Soever arising, even if the company has been advised of the possibility of such damages.

SECTION 13 - DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous

waste regulations to ensure complete and accurate classification.

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RCRAP-Series : None listed.
RCRA U-Series : Un Listed
CAS# 56-23-5 : waste number U211.

SECTION 14 - TRANSPORT INFORMATION

US DOT

Shipping Name : CARBON TETRACHLORIDE CARBON TETRACHLORIDE
Hazard Class : 6.1
UN Number : Un1846
Packing Group : II

Canada TDG

Shipping Name : CARBON TETRACHLORIDE CARBON TETRACHLORIDE
Hazard Class : 6.1
UN Number : Un1846
Packing Group : II

SECTION 15 - REGULATORY INFORMATION

US FEDERAL

TSCA:

CAS# 56-23-5 is listed on the TSCA inventory.

Health & Safety Reporting List:

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules:

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b:

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule:

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding Rqs:

CAS# 56-23-5: 10 lb final RQ; 4.54 kg final RQ

SARA Section 302 Extremely Hazardous Substances:

None of the chemicals in this product have a TPQ.

SARA Codes:

CAS # 56-23-5: acute, chronic.

Section 313 :

This material contains Carbon tetrachloride (CAS# 56-23-5, 99-100%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

CAS# 56-23-5 is listed as a hazardous air pollutant (HAP). CAS# 56-23-5 is listed as a Class 1 ozone depletor with an 1.1 ODP; 1400 GWP This material does not contain any Class 2

Ozone depletors.

Clean Water Act:

CAS# 56-23-5 is listed as a Hazardous Substance under the CWA. CAS# 56-23-5 is listed as a Priority Pollutant under the Clean Water Act. CAS# 56-23-5 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE:

CAS# 56-23-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65:

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Carbon tetrachloride, a chemical known to the state of California to cause cancer. California No Significant Risk Level: CAS# 56-23-5: 5 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 40 Limited evidence of a carcinogenic effect.

R 59 Dangerous for the ozone layer.

R 48/23 Toxic : danger of serious damage to health by prolonged exposure through inhalation.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 59 Refer to manufacturer/supplier for information on recovery/recycling.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 56-23-5: 3

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada - DSL/NDSL :

CAS# 56-23-5 is listed on Canada's DSL List.

Canada - WHMIS :

This product has a WHMIS classification of D1A, D2A.

Canadian Ingredient Disclosure List :

CAS# 56-23-5 is listed on the Canadian Ingredient Disclosure List.

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

