Montreal	St-Laurent	Tel : 514-956-7503	Fax : 514-956-7504
Ottawa	Nepean	Tel : 613-226-4228	Fax : 613-226-4229
Quebec	Quebec	Tel : 418-834-7447	Fax : 418-834-3774

Tel: 514-956-7503
Fax: 514-956-7504
Internet: www.megs.ca
Email : support@megs.ca

CARBON TETRACHLORIDE- MATERIAL SAFETY DATA SHEET

TABLE OF CONTENTS:

24 Hour EMERGENCY CONTACT

U.S- CHEMTREC 1-800-424-9300

CANADA- CANUTEC 613-996-6666

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Up to Table of Contents

Matheson Tri-Gas, Inc.

The telephone numbers listed below are emergency numbers, please contact your local branch for routine inquiries.

USA	CANADA
959 Route 46 East	530 Watson Street
Parsippany, New Jersey	Whitby, Ontario
07054-0624 USA	L1N 5R9 Canada
Phone: 973-257-1100	**Phone:** 905-668-3570

SUBSTANCE: CARBON TETRACHLORIDE

SYMBOL: CCl_4

TRADE NAMES/SYNONYMS:
TETRACHLOROMETHANE; PERCHLOROMETHANE; CARBON CHLORIDE; TETRACHLOROCARBON; METHANE TETRACHLORIDE; CARBON TET; FREON 10; HALON 104; BENZINOFORM; STCC 4940320; UN 1846; C-186; C-187; C-199; C-570; C-612; RCRA U211; MAT04310; RTECS FG4900000

CHEMICAL FAMILY: halogenated, aliphatic

CREATION DATE: Jan 24 1989
REVISION DATE: Mar 16 1999

2. COMPOSITION, INFORMATION ON INGREDIENTS

Up to Table of Contents

COMPONENT: CARBON TETRACHLORIDE

CAS NUMBER: 56-23-5

EC NUMBER (EINECS): 200-262-8

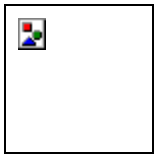
EC INDEX NUMBER: 602-008-00-5

PERCENTAGE: 100.0

3. HAZARDS IDENTIFICATION

Up to Table of Contents

NFPA RATINGS (SCALE 0-4): HEALTH=0 FIRE=0 REACTIVITY=0

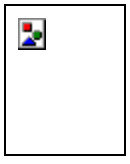


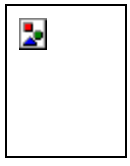
WHMIS CLASSIFICATION: D2

EC CLASSIFICATION (ASSIGNED):
T Toxic
N Dangerous for the Environment
Carcinogen Category 3

R 23/24/25-40-48/23-52/53-59

EC Classification may be inconsistent with independently-researched data.





EMERGENCY OVERVIEW:
Color: colorless

Physical Form: liquid

Odor: sweet odor

Major Health Hazards: central nervous system depression, suspect cancer hazard (in animals)

POTENTIAL HEALTH EFFECTS:

INHALATION:
Short Term Exposure: irritation, digestive disorders, headache, symptoms of drunkenness, lung congestion, kidney damage, liver damage, effects on the brain, convulsions, coma
Long Term Exposure: visual disturbances, reproductive effects, cancer

SKIN CONTACT:
Short Term Exposure: same as effects reported in short term inhalation, rash, symptoms of drunkenness, kidney damage, liver damage
Long Term Exposure: same as effects reported in long term inhalation

EYE CONTACT:
Short Term Exposure: no information on significant adverse effects
Long Term Exposure: no information is available

INGESTION:
Short Term Exposure: same as effects reported in short term inhalation, symptoms of drunkenness, lung congestion, kidney damage, liver damage
Long Term Exposure: cancer

CARCINOGEN STATUS:
OSHA: N
NTP: Y
IARC: Y

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4. FIRST AID MEASURES

Up to Table of Contents

INHALATION:
Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

SKIN CONTACT:
Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT:
Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION:
Get medical attention immediately.

NOTE TO PHYSICIAN:
For ingestion, consider gastric lavage. Avoid stimulants.

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5. FIRE FIGHTING MEASURES

Up to Table of Contents

FIRE AND EXPLOSION HAZARDS:
Negligible fire hazard.

EXTINGUISHING MEDIA:
regular dry chemical, regular foam, water

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING:
Move container from fire area if it can be done without risk. Fight large fires from a protected location or safe distance. Stay away from the ends of tanks. Dike for later disposal. Do not scatter spilled material with high-pressure water streams.

FLASH POINT:
No data available.

6. ACCIDENTAL RELEASE MEASURES

Up to Table of Contents

AIR RELEASE:
Reduce vapors with water spray. Stay upwind and keep out of low areas. Collect runoff for disposal as potential hazardous waste.

SOIL RELEASE:
Dig holding area such as lagoon, pond or pit for containment. Dike for later disposal. Absorb with sand or other non-combustible material. Collect with absorbent into suitable container.

WATER RELEASE:
Trap spilled material at bottom in deep water pockets, excavated holding areas or within sand bag barriers. Remove trapped material with suction hoses. Absorb with activated carbon. Collect spilled material using mechanical equipment. Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:
Do not touch spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Small dry spills: Move containers away from spill to a safe area. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Reportable Quantity (RQ): Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

Up to Table of Contents

Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances. Protect from physical damage. Store in a cool, dry place. Store in a well-ventilated area. Avoid heat, flames, sparks and other sources of ignition.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Up to Table of Contents

EXPOSURE LIMITS:
CARBON TETRACHLORIDE:
10 ppm OSHA TWA
25 ppm OSHA ceiling
200 ppm OSHA peak 5 minute(s)/4 hour(s)
2 ppm (12.6 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
5 ppm (31 mg/m3) ACGIH TWA (Notice of Intended Changes 1995-1996) (skin)
10 ppm (63 mg/m3) ACGIH STEL (Notice of Intended Changes 1995-1996)
2 ppm (12.6 mg/m3) NIOSH recommended STEL 60 minute(s)

VENTILATION: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.
At any detectable concentration -
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Escape -
Any air-purifying respirator with a full facepiece and an organic vapor canister.
Any appropriate escape-type, self-contained breathing apparatus.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Any self-contained breathing apparatus with a full facepiece.

9. PHYSICAL AND CHEMICAL PROPERTIES

Up to Table of Contents

PHYSICAL STATE: liquid

COLOR: colorless

ODOR: sweet odor

MOLECULAR WEIGHT: 153.84

MOLECULAR FORMULA: C-CL4

BOILING POINT: 172 F (78 C)

FREEZING POINT: -9 F (-23 C)

VAPOR PRESSURE: 91.3 mmHg @ 20 C

VAPOR DENSITY (air=1): 5.3

SPECIFIC GRAVITY (water=1): 1.58

WATER SOLUBILITY: 0.08%

PH: Not available

VOLATILITY: Not available

ODOR THRESHOLD: 10-50 ppm

EVAPORATION RATE: 12.8 (butyl acetate=1)

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SOLVENT SOLUBILITY:
Soluble: alcohol, ether, chloroform, benzene, carbon disulfide, oils, naphtha

10. STABILITY AND REACTIVITY

Up to Table of Contents

REACTIVITY:
Stable at normal temperatures and pressure.

CONDITIONS TO AVOID:
Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

INCOMPATIBILITIES:
combustible materials, metal salts, peroxides, halogens, oxidizing materials, metals, bases, amines

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: halogenated compounds, phosgene, oxides of carbon

POLYMERIZATION:
Will not polymerize.

11. TOXICOLOGICAL INFORMATION

Up to Table of Contents

CARBON TETRACHLORIDE:

IRRITATION DATA:
4 mg skin-rabbit mild; 500 mg/24 hour(s) skin-rabbit mild; 2200 ug/30 second(s) eyes-rabbit mild; 500 mg/24 hour(s) eyes-rabbit mild

TOXICITY DATA:
8000 ppm/4 hour(s) inhalation-rat LC50; >20 gm/kg skin-rabbit LD50; 2350 mg/kg oral-rat LD50

CARCINOGEN STATUS:
NTP: Anticipated Human Carcinogen; IARC: Animal Sufficient Evidence, Human Inadequate

Evidence, Group 2B; ACGIH: A2 -Suspected Human Carcinogen

ACUTE TOXICITY LEVEL:
Moderately Toxic: ingestion
Slightly Toxic: inhalation, dermal absorption

TARGET ORGANS:
central nervous system, liver, kidneys

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
history of alcoholism, alcoholism

TUMORIGENIC DATA:
Available.

MUTAGENIC DATA:
Available.

REPRODUCTIVE EFFECTS DATA:
Available.

ADDITIONAL DATA:
May cross the placenta. May be excreted in breast milk. Alcohol may enhance the toxic effects. Stimulants such as epinephrine may induce ventricular fibrillation.

12. ECOLOGICAL INFORMATION

Up to Table of Contents

ECOTOXICITY DATA:

FISH TOXICITY:
43100 ug/L 96 hour(s) LC50 (Mortality) Fathead minnow (Pimephales promelas)

INVERTEBRATE TOXICITY:
1500 ug/L 7 hour(s) EC50 (Regeneration) Flatworm (Dugesia japonica)

ALGAL TOXICITY:
>136000 ug/L NR hour(s) EC10 (Population Growth) Green algae (Haematococcus pluvialis)

OTHER TOXICITY:
900 ug/L 8 hour(s) EC50 (Teratogenesis) Leopard frog (Rana pipiens)

FATE AND TRANSPORT:

BIOCONCENTRATION:
30 ug/L 1-21 hour(s) BCF (Residue) Bluegill (Lepomis macrochirus) 52.3 ug/L

ENVIRONMENTAL SUMMARY:
Moderately toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Up to Table of Contents

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U211. Hazardous Waste Number(s): D019. Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 0.5 mg/L. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

Up to Table of Contents

U.S. DOT 49 CFR 172.101. SHIPPING NAME-UN NUMBER; HAZARD CLASS; PACKING GROUP; LABEL:
Carbon tetrachloride-UN1846; 6.1; II; Poison

15. REGULATORY INFORMATION

Up to Table of Contents

U.S. REGULATIONS:
TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y
Carbon tetrachloride: 10 LBS RQ

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): Y
Carbon tetrachloride

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):
ACUTE: Y
CHRONIC: Y
FIRE: N
REACTIVE: N
SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:
California Proposition 65: Y
Known to the state of California to cause the following:
Carbon tetrachloride
Cancer (Oct 01, 1987)

EUROPEAN REGULATIONS:

EC NUMBER (EINECS): 200-262-8

EC RISK AND SAFETY PHRASES:

R 23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R 40	Possible risks of irreversible effects.

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.
R 59	Dangerous for the ozone layer.
S 1/2	Keep locked-up and out of reach of children.
S 23	Do not breathe gas, fumes, vapour, or 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.

CONCENTRATION LIMITS:
C>=1% T R 23/24/25-40-48/23
0.2%<=C<1% Xn R 20/21/22-48/20

16. OTHER INFORMATION

Up to Table of Contents

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