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

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

MSDS
1,1,1-TRICHLOROETHANE- 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

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Matheson Tri-Gas, Inc.

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

USA
959 Route 46 East
Parsippany, New Jersey
07054-0624 USA
Phone: 973-257-1100

CANADA
530 Watson Street
Whitby, Ontario
L1N 5R9 Canada
Phone: 905-668-3570

SUBSTANCE: 1,1,1-TRICHLOROETHANE

SYMBOL: $C_2H_3Cl_3$

TRADE NAMES/SYNONYMS:
VINYL TRICHLORIDE; BETA-TRICHLOROETHANE; ETHANE, 1,1,1-TRICHLORO-; ETHANE TRICHLORIDE; 1,1,1-TRICHLOROETHANE; 1,1,1-TRICHLORETHANE; RCRA U227; C2H3CL3; MAT26380; RTECS KJ3150000

CHEMICAL FAMILY: halogenated, aliphatic

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

2. COMPOSITION, INFORMATION ON INGREDIENTS

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COMPONENT: 1,1,1-TRICHLOROETHANE

CAS NUMBER: 79-00-5

EC NUMBER (EINECS): 201-166-9

EC INDEX NUMBER: 602-014-00-8

PERCENTAGE: 100.0

3. HAZARDS IDENTIFICATION

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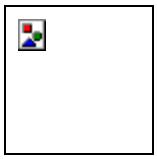
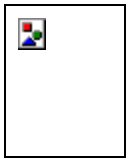
NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=1 REACTIVITY=0

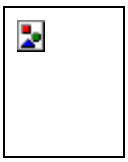


EC CLASSIFICATION (ASSIGNED):
Xn Harmful

R 20/21/22

EC Classification may be inconsistent with independently-researched data.





EMERGENCY OVERVIEW:
Color: colorless

Physical Form: liquid

Odor: sweet odor

Major Health Hazards: harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, central nervous system depression

POTENTIAL HEALTH EFFECTS:

INHALATION:
Short Term Exposure: irritation, irregular heartbeat, headache, symptoms of drunkenness, kidney damage, liver damage
Long Term Exposure: tingling sensation, paralysis

SKIN CONTACT:
Short Term Exposure: irritation, symptoms of drunkenness, kidney damage, liver damage
Long Term Exposure: kidney damage

EYE CONTACT:
Short Term Exposure: irritation
Long Term Exposure: same as effects reported in short term exposure

INGESTION:
Short Term Exposure: vomiting, digestive disorders, headache, symptoms of drunkenness, lung congestion, kidney damage, liver damage
Long Term Exposure: no information on significant adverse effects

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

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4. FIRST AID MEASURES

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INHALATION:
When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately.

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:
If vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

NOTE TO PHYSICIAN:
For inhalation, consider oxygen. For ingestion, consider gastric lavage. Consider oxygen.

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5. FIRE FIGHTING MEASURES

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FIRE AND EXPLOSION HAZARDS:
Slight fire hazard.

EXTINGUISHING MEDIA:
carbon dioxide, regular dry chemical

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

FIRE FIGHTING:
Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile).

FLASH POINT:
No data available.

LOWER FLAMMABLE LIMIT:
6.0%

UPPER FLAMMABLE LIMIT:
15.5%

6. ACCIDENTAL RELEASE MEASURES

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WATER RELEASE:
Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:
Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Small liquid spills: Absorb with sand or other non-combustible material. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. 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

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Store and handle in accordance with all current regulations and standards. 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. Store outside or in a detached building. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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EXPOSURE LIMITS:
1,1,1-TRICHLOROETHANE:
10 ppm (55 mg/m3) OSHA TWA (skin)
10 ppm (55 mg/m3) ACGIH TWA (skin)

10 ppm (55 mg/m3) NIOSH recommended TWA 10 hour(s) (skin)

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

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PHYSICAL STATE: liquid

APPEARANCE: clear

COLOR: colorless

ODOR: sweet odor

MOLECULAR WEIGHT: 133.40

MOLECULAR FORMULA: C-H2-CL-C-H-CL2

BOILING POINT: 235-237 F (113-114 C)

FREEZING POINT: -35 F (-37 C)

VAPOR PRESSURE: 17 mmHg @ 20 C

VAPOR DENSITY (air=1): 4.63

SPECIFIC GRAVITY (water=1): 1.4416

WATER SOLUBILITY: 0.45% @ 20 C

PH: Not available

VOLATILITY: 100%

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not available

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SOLVENT SOLUBILITY:
Soluble: chloroform, esters, ketones, alcohol, ether

10. STABILITY AND REACTIVITY

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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:
acids, metals, bases, oxidizing materials, combustible materials

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

POLYMERIZATION:
Will not polymerize.

11. TOXICOLOGICAL INFORMATION

Up to Table of Contents

1,1,1-TRICHLOROETHANE:

IRRITATION DATA:
500 mg open skin-rabbit mild; 810 mg/24 hour(s) skin-rabbit severe; 500 mg/24 hour(s) skin-rabbit mild; 162 mg eyes-rabbit mild; 500 mg/24 hour(s) eyes-rabbit mild; 1440 mg/15 minute(s) skin-guinea pig

TOXICITY DATA:
1654 ppm/6 hour(s) inhalation-rat LC50 (EPA, Toxicological Profile); 3730 ul/kg skin-rabbit LD50; 836 mg/kg oral-rat LD50

CARCINOGEN STATUS:
IARC: Animal Limited Evidence, Group 3; ACGIH: A4 -Not Classifiable as a Human Carcinogen

LOCAL EFFECTS:
Irritant: inhalation, skin, eye

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

TARGET ORGANS:

central nervous system, liver

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
kidney disorders, liver disorders, respiratory disorders, skin disorders and allergies

TUMORIGENIC DATA:
Available.

MUTAGENIC DATA:
Available.

ADDITIONAL DATA:
Alcohol may enhance the toxic effects.

12. ECOLOGICAL INFORMATION

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ECOTOXICITY DATA:

FISH TOXICITY:
5500 ug/L 4 day(s) LC50 (Mortality) Plaice, sand dab (Pleuronectes platessa)

INVERTEBRATE TOXICITY:
78000 ug/L 48 hour(s) EC50 (Immobilization) Water flea (Daphnia magna)

ALGAL TOXICITY:
170000 ug/L 96 day(s) EC50 (Growth) Green algae (Chlorella pyrenoidosa)

13. DISPOSAL CONSIDERATIONS

Up to Table of Contents

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U227.
Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

Up to Table of Contents

No classification assigned.

15. REGULATORY INFORMATION

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U.S. REGULATIONS:
TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y
1,1,1-Trichloroethane: 100 LBS RQ

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): Y

1,1,1-Trichloroethane

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:
1,1,1-Trichloroethane
Cancer (Oct 01, 1990)

EUROPEAN REGULATIONS:

EC NUMBER (EINECS): 201-166-9

EC RISK AND SAFETY PHRASES:

R 20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
S 2	Keep out of reach of children.
S 9	Keep container in a well-ventilated place.

CONCENTRATION LIMITS:
C>=5% Xn R 20/21/22

16. OTHER INFORMATION

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Matheson Tri-Gas makes no express or implied warranties, guarantees or representations regarding the product or the information herein, including but not limited to any implied warranty of merchantability or fitness for use. Matheson Tri-Gas shall not be liable for any personal injury, property or other damages of any nature, whether compensatory, consequential, exemplary, or otherwise, resulting from any publication, use or reliance upon the information herein.