

Safety Data Sheet

Section 1. Identification		
Product Identifier	Trichloroethylene	Version: 5 Effective Date: 21 February, 2016
Other Means Of Identification	Triclene; Trichloroethene; Ethylene trichloride	
Initial Supplier Identifier	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
Recommended Use and Restrictions On Use	Industrial solvent, degreaser. No restrictions.	
Product Family	Alkyl Halide	
24 Hour Emergency	Canutec (613) 996-6666	

Section 2. Hazard Identification	
Hazard Classification	 
Health Hazards	Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 2A Specific Target Organ Toxicity, (Single Exposure) – Category 3 Gem Cell Mutagenicity – Category 2 Carcinogenicity – Category 1 Acute Oral Toxicity – Category 5
Environmental Hazards	Hazardous To The Aquatic Environment – Short Term (Acute) Hazard – Category 3 Hazardous To The Aquatic Environment – Long Term (Chronic) Hazard – Category 3
Signal Word	Danger
Hazard Statement	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation; or may cause drowsiness or dizziness. Suspected of causing genetic defects. May cause cancer.

Safety Data Sheet

	<p>May be harmful if swallowed. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.</p>
Precautionary Prevention Statement	<p>Wash hands thoroughly after handling. Wear eye, face, gloves and clothing protection. Avoid breathing dust, fume, gas, mist, vapours and spray. Use only outdoors or in a well-ventilated area. Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment.</p>
Precautionary Response Statement	<p>IF ON SKIN: Wash with plenty water and soap. Specific Treatment: do not induce vomiting unless directed by medical personnel. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. . If eye irritation persists: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell. IF exposed or concerned: Get medical attention.</p>
Precautionary Storage Statement	<p>Store in a well-ventilated place. Keep container tightly closed. Store locked up.</p>
Precautionary Disposal Statement	<p>Dispose of contents / container in accordance with local regulations.</p>
Other Hazards	<p>None</p>

Section 3. Composition / Information on Ingredients

Chemical Name	Common Name or Synonyms	CAS NO. and Other Unique Identifiers	% by weight
Trichloroethylene	Ethylene trichloride	79-01-6	90 - 100

Section 4. First-Aid Measures

Eye Contact	Flush eyes with water for 15 minutes. Seek medical attention.
Skin Contact	Flush area with water. If irritation persists seek medical attention. Launder clothing before reuse.
Inhalation	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention.

Safety Data Sheet

Ingestion	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention.
Most Important Symptoms and Effects Both Acute and Delayed	May cause allergic skin reaction. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, light headedness, chest pain, muscle pain or flushing.
Immediate Medical Attention and Special Treatment	Because rapid absorption through the lungs may occur if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by the physician. If lavage is performed, it is suggested to use endotracheal and /or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Supportive care. Treatment based on judgment of the physician. In response to the reactions of the patient. Only administer adrenaline after careful consideration following overexposure. Increased sensitivity of the heart to adrenaline may be caused by over exposure to this product.

Section 5. Fire-Fighting Measures	
Suitable and Unsuitable Extinguishing Media	Dry chemicals, CO ₂ , alcohol foam.
Hazardous Combustion Products	Hydrogen chloride, carbon monoxide, carbon dioxide, phosgene, chlorine.
Specific Hazards Arising From the Product	Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated. Keep product and empty container away from heat and sources of ignition.
Special Protective Equipment and Precautions For Fire-Fighters	Fire-fighters should wear self contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire.

Section 6. Accidental Release Measures	
Personal Precautions, Protective Equipment and Emergency Procedures	Chemical resistant footwear and coveralls. Air purifying respirator fitted with organic vapour cartridges. Safety glasses. Neoprene gloves. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.
Environmental Precautions	Do not allow material to enter, sewers and surface watercourses.

Safety Data Sheet

Methods and Materials for Containment and Clean-Up	Cordon off area; do not allow personnel other clean up crew in the area. Soak up or pump up spilled material (absorbent for organic materials). Place in an appropriate container for disposal. Remove all sources of ignition and hot surfaces. Wash area with soap and water to remove any residues.
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Section 7. Handling and Storage	
Precautions For Safe Handling	Handle with care. Toxic material. Do not inhale vapours or mists. Avoid contact with skin and eyes.
Conditions For Safe Storage	Store in a cool dry place. Do not allow to come in contact with hot surfaces or sources of ignition.

Section 8. Exposure Controls / Personal Protection				
Control Parameters	TWA: 8 Hr	STEL: 15 min	Ceiling	IDLH *
Trichloroethylene	10 ppm ACGIH	25 ppm		1000 ppm
	* Immediately Dangerous to Life and Health			
Exposure Controls	Local exhaust ventilation			
Appropriate Engineering Controls	Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.			
Individual Protective Measures	If exposure limits are exceeded:			
Eye / Face Protection	Safety glasses.			
Skin Protection	Chemical resistant coveralls, gloves			
Respiratory Protection	Air purifying respirator fitted with organic vapour cartridges			

Section 9. Physical and Chemical Properties	
Appearance	Clear, colourless liquid
Odour	Typical ether odour
Odour Threshold	Not available.
pH	Not applicable
Flash Point	89.6 °C
Boiling Point and Boiling Range	87 °C
Melting Point and Freezing Point	-87 °C
Evaporation Rate	0.28 (ether =1)
Flammability (solid, gas)	Not applicable

Safety Data Sheet

Upper and Lower Flammability or Explosive Limits	8% - 10.5% vol
Vapour Pressure	57.8 mmHg @ 20 °C
Vapour Density	4.54 (air = 1)
Relative Density	1.465
Solubility	Insoluble
Partition co-efficient, n-Octanol/Water	No data
Auto-ignition Temperature	410 °C
Decomposition Temperature	> 120°C
Viscosity	0.55 mPa.s (25°C)

Section 10. Stability and Reactivity	
Reactivity	Stable
Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur
Conditions to Avoid	Avoid excessive heat, open flames and all ignition sources. Direct sunlight.
Incompatible Materials	Strong oxidisers. Strong bases. Amines. Powdered metals. Alkali metals.
Hazardous Decomposition Products	Decomposition products can include and are not limited to: Hydrogen chloride, chlorine and phosgene. NOTE: Water contamination may cause corrosion of metals due to formation of hydrochloric acid.

Section 11. Toxicological Information			
Component Toxicity	LD50 Oral	LD50 Dermal	LC50 Inhalation
Trichloroethylene	4.29 g/kg (Rat)	20 g/kg (Rabbit)	8000 g/m ³ (Rat) 1h
Likely Routes of Exposure			
Skin:	Single exposure should not result in harmful amounts being absorbed through the skin. Repeated and prolonged exposure and contact may result in dermatitis and absorption of significant and potentially harmful quantities.		
Eyes:	Irritation may be slow to heal. Vapour may cause eye irritation, discomfort and redness. Can cause corneal injury.		
Inhalation:	Central nervous system depressant – symptoms include: headache, dizziness, drowsiness, in-coordination, slowed reactions, slurred speech, giddiness and unconsciousness. Fatalities can follow severe		

Safety Data Sheet

Ingestion:	<p>exposure to various chlorinated solvents due to ventricular fibrillation.</p> <p>May cause irritation of the mouth and gastrointestinal tract. May cause some similar symptoms as inhalation. Aspiration into the lungs may occur if vomiting occurs after ingestion, this will result in lung damage. Pneumonitis: symptoms include coughing, difficulty breathing, wheezing, coughing up blood and pneumonia which can be fatal.</p>
Acute Toxicity Estimates (ATE)	No data
STOT (Specific Target Organ Toxicity) – Single Exposure	Central nervous system (CNS)
Aspiration Toxicity	Not classified
STOT (Specific Target Organ Toxicity) – Repeated Exposure	Kidney Liver Heart spleen Blood
Skin Corrosion / Irritation	Irritant
Serious Eye Damage / Irritation	Irritant
Respiratory or Skin Sensitization	Not classified
Carcinogenicity	<p>Group 2A - Tumors were observed in mice given large doses of trichloroethylene. Data suggest a nongenotoxic mechanism for tumor formation that implies that nontoxic doses of trichloroethylene should pose little or no carcinogenic hazard. Low incidence of tumors has been observed in male rats at high levels of trichloroethylene which caused reduced survival, rendering these studies inadequate. Limited epidemiology data have shown a weak association between trichloroethylene exposure and renal cancer.</p>
Reproductive Toxicity	
- Sexual Function and Fertility	Not classified
- Development of Offspring	Not classified
- Effects on or via Lactation	Not classified
Germ Cell Mutagenicity	Mutagenic effects have occurred in humans
Interactive Effects	None known
Other Information	None known

Safety Data Sheet

Section 12. Ecological Information	
Ecotoxicity	LC50: 40.7 mg/L (Pimephales promelas) LC50: 45 mg/L (Lepomis macrochirus) LC50: 60 mg/L (Brachydanio rerio) EC50: 450 mg/L (Scenedesmus subspicatus).
Persistence and Degradability	Persistence is unlikely based on information available.
Bioacumulative Potential	No data
Biodegradability	Not readily bio-degradable
Mobility in Soil	No data.
Other Adverse Effects	Material is moderately toxic to aquatic organisms on an acute basis (LC50 or EC50 between 1 and 10 mg/L in most sensitive species).

Section 13. Disposal Considerations	
Disposal Considerations	Dispose of contents / container in accordance with local regulations

Section 14. Transport Information	
UN Number	1710
UN Proper Shipping Name	Trichloroethylene
Transport Hazard Class(es)	6.1
Packaging Group	III
Environmental Hazards	Yes.
Bulk Transport	Not applicable
Special Precaution	Not applicable
DOT Erg#	160

Section 15. Regulatory Information	
Canada – DSL Inventory	All components of this product are either on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL) or exempt
TSCA	All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt
Additional Information	None

Safety Data Sheet

Section 16. Other Information	
NFPA Rating	Health-3/ Flammability-1/Reactivity-0/Special Hazard-Not applicable
HMIS Rating	Health-3/Flammability-1/Reactivity-0/Personal Protection-See Section 8.
Prepared by:	Chemfax Products Ltd., Technical Department
Date Prepared:	26 August, 2011
Date of Latest Revision:	21 February, 2016
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