

Material Safety Data Sheet

Trichloro propane

Section 1 - Product Identification

Product name: Trichloro propane
Product Number: 30429
Brand: Restek Corporation
Supplier: Restek Corporation 110 Benner Circle Bellefonte, Pa. 16823
Telephone: +814-353-1300
Fax : +814-353-1309
Emergency Phone # (For both supplier and manufacturer) : 800-424-9300 (CHEMTREC) 703-527-3887 (Outside the US)

Section 2 – Composition/Information on Ingredients

Chemical Name	CAS #	EINEC #	% Composition
Methanol	67-56-1	200-659-6	99.8
1,2,3-trichloropropane	96-18-4	202-486-1	0.2

Section 3 – Hazards Identification

Emergency Overview

GHS Classification: Carcinogenicity Category 1B Specific Target Organ Systemic Toxicity (STOT) - Single Exposure
Category 1 Flammable Liquid Category 2 Acute Toxicity - Inhalation Dust / Mist Category 3 Acute Toxicity - Dermal
Category 3 Acute Toxicity - Oral Category 3

GHS Signal Word: Danger

GHS Hazard: Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. May cause cancer.
Causes damage to organs.

Safety Precautions: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilation and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands and skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

First Aid Measures: IF SWALLOWED: Immediately call a POISON CENTER/doctor/.... IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Specific treatment sees section 4. Rinse mouth. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use extinguishing media in section 5 for extinction.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/container according to section 13 of the SDS.

Single Exposure Target Organs: Specific target organ toxicity - Single exposure - STOT SE 1: H370 Causes damage to organs. (C >= 10 %; No information to prove exclusion of certain routes of exposure); Specific target organ toxicity - Single exposure - STOT SE 2: H371 May cause damage to organs.

Repeated Exposure Target Organs: No data available

Section 4 – First-Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately

Eyes: Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.

Skin Contact: Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists.

Ingestion: Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this SDS.

Section 5 – Fire Fighting Measures

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water may be ineffective but water spray can be used to extinguish a fire if swept across the base of the flames. Water can absorb heat and keep exposed material from being damaged by fire.

Fire and/or Explosion Hazards: Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back.

Fire Fighting Methods and Protection: Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.

Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 – Accidental Release Measures

Personal Precautions and Equipment: Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Methods for Clean-up: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal.

Section 7 – Handling and Storage

Handling Technical Measures and Precautions: Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well-ventilated area. Use spark-proof tools and explosion-proof equipment

Storage Technical Measures and Conditions: Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Keep away from sources of ignition

Section 8 – Exposure Controls/Personal Protection

Personal Protection:

Engineering Measures: Local exhaust ventilation is recommended when generating excessive levels of vapours from handling or thermal processing.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. If an exposure limit is exceeded or if an operator is experiencing symptoms of inhalation overexposure as explained in Section 3, provide respiratory protection.

Eye Protection: Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses.

Skin Protection: Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Section 9 – Physical and Chemical Properties

Appearance, color: No data available

Odor: Mild

Physical State: Liquid

pH: Not applicable

Vapor Pressure: No data available

Vapor Density: 1.1 (air = 1)

Boiling Point (°C): 155 - 156 °C 64.7 °C at 760 mmHg (HSDB)

Melting Point (°C): -98 °C

Flash Point (°F): 52

Flammability: Highly Flammable

Upper Flammable/Explosive Limit, % in air: 36

Lower Flammable/Explosive Limit, % in air: 6

Autoignition Temperature (°C): 464 deg C

Decomposition Temperature (°C): No data available

Specific Gravity: 0.791 - 0.792 g/cm³ at 20 °C

Evaporation Rate: No data available

Odor Threshold: No data available

Solubility: Moderate; 50-99%

Partition Coefficient: n-octanol in water: No data available

VOC % by weight: 0

Molecular Weight: 32.04

Section 10 – Stability and Reactivity

Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Materials to Avoid / Chemical Incompatibility: Strong oxidizing agents

Hazardous Decomposition Products: Carbon dioxide Carbon monoxide

Section 11 – Toxicological Information

Routes of Entry: Inhalation, Skin Contact, Eye Contact, Ingestion

Target Organs Potentially Affected By Exposure: Eyes, Central nervous system stimulation, Skin, GI Tract, Respiratory Tract

Chemical Interactions That Change Toxicity: None Known

Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation: Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache.

Inhalation Toxicity: Harmful! Can cause systemic damage (see "Target Organs") Methanol can cause central nervous system depression and overexposure can cause damage to the optic nerve resulting in visual impairment or blindness.

Skin Contact: Can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Eye Contact: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.

Ingestion Irritation: Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea. Highly toxic and may be fatal if swallowed.

Ingestion Toxicity: Toxic if swallowed. May cause target organ failure and/or death. May be fatal if swallowed.

Long-Term (Chronic) Health Effects:

Carcinogenicity: Contains a probable or known human carcinogen.

Reproductive and Developmental Toxicity: No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Inhalation: Upon prolonged and/or repeated exposure, can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache. Harmful! Can cause systemic damage upon prolonged and/or repeated exposure (see "Target Organs")

Skin Contact: Upon prolonged or repeated contact, can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Ingestion: Toxic if swallowed. May cause target organ failure and/or death.

Section 12 – Ecological Information

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.

Mobility: No data

Persistence: No data

Bioaccumulation: No data

Degradability: Biodegrades slowly.

Ecological Toxicity Data: No data available

Section 13 – Disposal Considerations

Waste Description of Spent Product: Spent or discarded material is a hazardous waste. Mixing spent or discarded material with other materials may render the mixture hazardous. Perform a hazardous waste determination on mixtures.

Disposal Methods: Dispose of by incineration following Federal, State, Local, or Provincial regulations.

Waste Disposal of Packaging: Comply with all Local, State, Federal, and Provincial Environmental Regulations.

Section 14 – Transport Information

United States:

DOT Proper Shipping Name: Methanol

UN Number: UN1230

Hazard Class: 3

Packing Group: II

International:

IATA Proper Shipping Name: Methanol

UN Number: UN1230

Hazard Class: 3(6.1)

Packing Group: II

Section 15 – Regulatory Information

The following chemicals are listed on CA Prop 65:

Chemical Name	CAS #	Regulation
1,2,3-Trichloropropane	96-18-4	Prop 65 Cancer
Methanol	67-56-1	Prop 65 Develop Tox

State Right To Know Listing:

Chemical Name	CAS #	New Jersey	Massachusetts	Pennsylvania	California
Methanol	67-56-1	X	X	X	X
1,2,3-trichloropropane	96-18-4	X	X	X	X

Section 16 : Additional Information

Prior Version Date: 07/06/16**Other Information:** Any changes to the SDS compared to previous versions are marked by a vertical line in front of the concerned paragraph.**References:** No data available

Disclaimer: Restek Corporation provides the descriptions, data and information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. It is provided for your guidance only. Because many factors may affect processing or application/use, Restek Corporation recommends you perform an assessment to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including fitness for a particular purpose, are made regarding products described, data or information set forth. In no case shall the descriptions, information, or data provided be considered a part of our terms and conditions of sale. Further, the descriptions, data and information furnished hereunder are given gratis. No obligation or liability for the description, data and information given are assumed. All such being given and accepted at your risk.