Section 1 Chemical Product and Company Information



CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory use only. Not for drug, food or household use. Page E1 of E2

Product CHLOROFORM

Synonyms Trichloromethane

Section 2 Hazards Identification

Signal word: WARNING Pictograms: GHS07 / GHS08

Target organs: Central nervous system, Liver, Kidneys.



GHS Classification:

Acute toxicity, oral (Category 4) Skin irritation (Category 2) Carcinogenicity (Category 2) STOT-SE (Category 2)

GHS Label information: Hazard statement:

H302: Harmful if swallowed. H315: Causes skin irritation. H351: Suspected of causing cancer.

H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary statement:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe mist/vapours/spray. P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or

doctor if you feel unwell.

P302+P352+P313: IF ON SKIN: Wash with plenty of water and soap. Get medical attention.

P308+P313: IF exposed or concerned: Get medical attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - WARNING! This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

Section 3 Composition / Information on Ingredients							
Chemical Name	CAS#	%	EINECS				
Chloroform	67-66-3	100%	200-663-8				

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Page E2 of E2 Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure Controls / Personal Protection							
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)				
	Chloroform	TWA: 10 ppm STEL: 49 mg/m ³ (A3)	STEL: C 50 ppm / C 240 mg/m ³	STEL: 2 ppm / 9.78 mg/m ³ (60 min.)				

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Physical & Chemical Properties Section 9

Appearance: Clear, colorless liquid.

Odor: Sweet odor.

Odor threshold: Data not available

pH: Data not available

Melting / Freezing point: Data not available

Boiling point: 61.1°C (142°F) Flash point: Non combustible

Section 10 Stability & Reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures and heat.

Incompatible materials: Strong alkalies, strong oxidizers, alkali metals, metallic fines or powders, acetone, aluminum, disilane and magnesium.

Evaporation rate (Ether = 1): 0.56

Vapor density (Air = 1): 4.13

Flammability (solid/gas): Data not available.

Vapor pressure (mm Hg): 160 @ 20°C

Solubility(ies): Slightly soluble in water.

Explosion limits: Lower / Upper: Data not available

Relative density (Specific gravity): 1.48 @ 25/25°C

Hazardous decomposition products: Phosgene, hydrogen chloride, chlorine.

Section 11 **Toxicological Information**

Acute toxicity: Oral-rat LD50: 300 mg/kg; Dermal-rabbit LD50: >2000 mg/kg; Inhalation-rat LC50: 47.7 mg/l/4 hours

Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: Reasonably anticipated to be a human carcinogen. IARC classified: Group 2B: Possibly carcinogenic to humans.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation causes cough, dizziness, drowsiness, headache, nausea, and unconciousness.

Ingestion: Ingestion causes abdominal pain and vomiting. Further see Inhalation.

Skin: Contact with skin causes redness, pain, dry skin. Eyes: Contact with eyes causes redness and pain.

Signs and symptoms of exposure: Effects of short-term exposure: The substance is irritating to the eyes. The substance may cause effects on the central nervous system, liver and kidneys. The effects may be delayed. Effects of long-term or repeated exposure: The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the liver and kidneys. This substance is possibly carcinogenic to humans. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: FS9100000

Section 12 **Ecological Information**

Toxicity to fish: Brachydanio rerio (fish, fresh water), LC50 = 100 mg/L/48 hours

Toxicity to daphnia and other aquatic invertebrates: Artemia salina (Crustacea), EC50 = 68 mg/L/10 hours

Toxicity to algae: Chlamydomonas reinhardii (Algae), EC50 = 13.3 mg/L/72 hours

Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Transport Information (US DOT / CANADA TDG) Section 14

UN/NA number: UN1888 Shipping name: Chloroform

Reportable Quantity: 10 lbs (4.54 kg) Hazard class: 6.1 Packing group: III Marine pollutant: No

2012 ERG Guide # 151 **Exceptions:** Limited quantity equal to or less than 5 L

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Chloroform	Listed	10 lbs (4.54 kg)	U004	Listed	Not listed	◎ ① D1B; D2A; D2B

Section 16 **Additional Information**

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook

> Revision Date: September 10, 2014 Supercedes: December 10, 2013

Partition coefficient: (n-octanol / water): Log Pow: 2

Auto-ignition temperature: Data not available

Viscosity: Data not available. Molecular formula: CHCl3

Molecular weight: 119.38

Decomposition temperature: Data not available