



SAFETY DATA SHEET

CHLOROFORM

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Chloroform (CHCl₃)

TRADE NAMES/SYNONYMS: Trichloromethane; Methyl trichloride; Methane trichloride

Substance :

CHEMICAL FAMILY: CHLORO METHANES

Product Use : Agrochemicals, Pharmaceuticals.

Manufacturers: SRF Ltd. Fluoro & Speciality chemicals Business
D-2/1, GIDC Phase-2, PCPIR, Dahej
District-Bharuch, Gujarat
Pin Code-392130

EMERGENCY CONTACT: (24 Hours/Day, 7 Days/Week)
Mr. Hamid Hasan Sayyad
+91 – (02641) 289201, 289202

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: Chloroform

CAS NUMBER: 67-66-3

UN No. : 1888

PERCENTAGE: 100%

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH= 02 FIRE= 0 REACTIVITY= 0

EMERGENCY OVERVIEW:

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Block-C, Sector-45, Gurgaon-122003,
Haryana, India
[Tel:+91-124-435400](tel:+91-124-435400)
[Website-www.srf.com](http://www.srf.com)

COLOR: COLOURLESS LIQUID

PHYSICAL FORM: Liquid

ODOR: SWEET & PLEASANT

MAJOR HEALTH HAZARDS : Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

PHYSICAL HAZARDS:

POTENTIAL HEALTH EFFECTS:

INHALATION: Causes irritation, headache, drowsiness, vomiting, dizziness, pain, unconsciousness, irregular heartbeat.

SHORT TERM EXPOSURE: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

LONG TERM EXPOSURE: Causes damage to the nervous system, the heart and the liver and kidneys. Chloroform is a suspected human carcinogen.

SKIN CONTACT :

SHORT TERM EXPOSURE: Causes skin irritation resulting in redness and pain. Removes natural oils.

LONG TERM EXPOSURE: -

EYE CONTACT:

SHORT TERM EXPOSURE: Vapors cause pain and irritation to eyes. Splashes may cause severe irritation and possible eye damage.

LONG TERM EXPOSURE: -

INGESTION:

SHORT TERM EXPOSURE: May cause central nervous system depression, kidney damage, and liver damage. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause cardiac disturbances. May cause chemical pneumonitis, which may be fatal.

LONG TERM EXPOSURE: -

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4. FIRST AID MEASURES

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SKIN CONTACT: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient.

Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

EYE CONTACT: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

INGESTION: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

NOTE TO PHYSICIAN:

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5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES : Non Flammable

FLASH POINT: NA

FLASH POINT METHOD: NA

AUTOIGNITION TEMPERATURE: NA

UPPER FLAME LIMIT (volume % in air): NA

LOWER FLAME LIMIT (volume % in air): NA

FLAME PROPAGATION RATE (solids): NA

OSHA FLAMMABILITY CLASS: NA

EXTINGUISHING MEDIA:NA

UNUSUAL FIRE AND EXPLOSION HAZARDS: NA

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS: NA

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE:

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Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. HANDLING AND STORAGE

NORMAL HANDLING: Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as metals, alkalis.

STORAGE RECOMMENDATIONS: Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Chloroform	5 ppm 30 mg/m ³	TWA: 10 (ppm)	

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

ENGINEERING CONTROLS:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

PERSONAL PROTECTIVE EQUIPMENT

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent, Gloves.

SKIN PROTECTION: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

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EYE PROTECTION: Use chemical safety goggles or a full face shield where splashing is possible.
Maintain eye wash fountain and quick-drench facilities in work area.

RESPIRATORY PROTECTION: Personal Respirators (NIOSH Approved). If the exposure limit is exceeded, wear a supplied air, full-face piece respirator,

ADDITIONAL RECOMMENDATIONS:

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: Clear

COLOR: Colorless.

ODOR: Pleasant. Sweetish. Etheric. Non-irritating

MOLECULAR WEIGHT: 119.38 g/mole

MOLECULAR FORMULA: CHCl₃

BOILING POINT: 61°C (141.8°F)

MELTING/ FREEZING POINT: -63.5°C (-82.3°F)

VAPOR PRESSURE: 21.1 kPa (@ 20°C)

VAPOR DENSITY (air=1): 4.36 (Air = 1)

SPECIFIC GRAVITY: 1.484 (Water = 1)

WATER SOLUBILITY: Very slightly soluble in cold water

PH: Not available.

VOLATILITY: Not available.

ODOR THRESHOLD: 85 ppm

EVAPORATION RATE: NA

COEFFICIENT OF WATER/OIL DISTRIBUTION:

The product is more soluble in oil; log(oil/water) = 2

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):

The product is stable

INCOMPATIBILITIES: Reactive with metals, alkalis.

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HAZARDOUS DECOMPOSITION PRODUCTS: NA

HAZARDOUS POLYMERIZATION: Will not occur.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Light Sensitive. Incompatible with triisopropyl phosphine, acetone, disilane, fluorine, strong bases and reactive metals (aluminum, magnesium in powdered form), light.

Special Remarks on Corrosivity: It will attack some forms of plastics, rubber, and coatings

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS: Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

CARCINOGENIC EFFECTS: Classified + (Proven.) by NIOSH. Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. Classified 2 (Some evidence.) by

NTP. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: kidneys, liver, heart.

OTHER DATA:

Special Remarks on Chronic Effects on Humans: May affect genetic material (possible mutagen) and cause adverse reproductive effects(embryotoxicity and fetotoxicity) Suspected carcinogen (tumorigenic) and teratogen based on animal data.

Human: passes the placental barrier, detected in maternal milk

12. ECOLOGICAL INFORMATION

Ecotoxicity: Ecotoxicity in water (LC50): 43.8 mg/l 96 hours [Trout].

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

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Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the product itself.

Special Remarks on the Products of Biodegradation: Not available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. TRANSPORT INFORMATION

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Chloroform UNNA: UN1888 PG: III

Special Provisions for Transport: Not available.

15. REGULATORY INFORMATION

California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Chloroform California prop. 65 (no significant risk level): Chloroform: 0.02 mg/day (value) California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Chloroform New York release reporting list: Chloroform Rhode Island RTK hazardous substances: Chloroform Pennsylvania RTK: Chloroform Massachusetts RTK: Chloroform New Jersey: Chloroform California Director's List of Hazardous Substances (8 CCR 339): Chloroform Tennessee: Chloroform TSCA 8(b) inventory: Chloroform TSCA 8(d) H and S data reporting: Chloroform: effective: 6/1/87; sunset: 6/1/97 SARA 302/304/311/312 extremely hazardous substances: Chloroform SARA 313 toxic chemical notification and release reporting: Chloroform CERCLA: Hazardous substances.: Chloroform: 10 lbs. (4.536 kg)

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R20/22- Harmful by inhalation and if swallowed. R38- Irritating to skin. R40- Possible risks of irreversible effects.

S36/37- Wear suitable protective clothing and gloves.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

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Health: 2

Flammability: 0

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Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Wear appropriate respirator when ventilation is inadequate. Splash goggles.

16. OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

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