

# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, amended by 2015/830/EU

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Identification of the product

Product Description	Chloroform
Synonym	Trichloromethane
Pure Substance/Preparation	Substance
CAS Number	67-66-3
EC Number	200-663-8

### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Laboratory chemical, Manufacture of substances
Uses advised against	No uses advised against has been identified

### 1.3 Details of the Supplier of the Safety Data Sheet

#### Gujrat Fluorochemicals Ltd.

12/A Dahej Industrial Estate, Taluka Vagra,  
Distt. Bharuch-392130, Gujrat, India

Website	www.gfl.co.in
Telephone	+91-2641-618031(Admin)/618041-50(Purchase)/618086-87(Security)
Fax	+91-2641-618012
E-mail address	contact@gfl.co.in

### 1.4 Emergency Telephone Number

Emergency telephone number +91-2641-618086-87 (Security)

## 2. Hazard Identification

### 2.1 Classification of the substance or Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

#### Classification acc. to GHS

Acute Oral Toxicity	Category 4 - (H302)
Acute Inhalation Toxicity	Category 3 - (H331)
Skin corrosion / Irritation	Category 2 - (H315)
Eye damage / Irritation	Category 2 - (H319)

Reproductive toxicity	Category 1 - (H361d)
Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity - Repeated (STOT-RE)	Category 1 - (H372)

## **2.2 Label elements**

### **Pictogram**



### **Signal Word**

Danger

### **Hazard Statements**

**H302** Harmful if swallowed  
**H331** Toxic if inhaled  
**H315** Causes skin irritation  
**H319** Causes serious eye irritation  
**H361d** Suspected of damaging the unborn child  
**H351** Suspected of causing cancer  
**H372** Causes damage to organs (liver, kidneys) through prolonged or repeated exposure (Inhalation, Oral)

### **Precautionary Statements**

#### **Prevention**

**P201** Obtain special instruction before use.  
**P202** Do not handle until all safety precautions have been read and understood.  
**P260** Do not breathe vapors.  
**P264** Wash exposed skin thoroughly after handling.  
**P271** Use only outdoors or in a well-ventilated area.  
**P280** Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### **Response**

**P301+P312** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
**P302+P352** IF ON SKIN: Wash with plenty of soap and water.  
**P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
**P305+P351+P338** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P308+P313** IF exposed or concerned: Get medical advice/attention.  
**P311** Call a POISON CENTER or doctor/physician.  
**P330** If swallowed, rinse mouth.  
**P332+P313** If skin irritation occurs: Get medical advice/attention.  
**P337+P313** If eye irritation persists: Get medical advice/attention.  
**P362+P364** Take off contaminated clothing and wash it before reuse.

#### **Storage**

**P403+P233** Store in a well-ventilated place. Keep container tightly closed.  
**P405** Store locked up.

#### **Disposal**

**P501** Dispose of contents/container to comply with local, state and federal regulation.

## **2.3 Other hazards**

The substance does not meet the criteria for a PBT or vPvB substance

### 3. Composition/information on Ingredients

#### 3.1. Substance

Chemical name	CAS-No	EC No	Weight %	EU - GHS Substance Classification (REGULATION (EC) No 1272/2008)	REACH No.
Chloroform	67-66-3	200-663-8	<=100	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT RE 1, H372	-

For the full text of the H-Statements mentioned in this Section, see Section 16

### 4. First aid measures

#### 4.1 Description of first-aid measures

<b>General advice</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least for 15 minutes. Take off contaminated clothing and wash before reuse. Seek immediate medical attention/advice.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

#### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### Indication of immediate medical attention and special treatment needed

Treat symptomatically and supportively. Signs of overdose includes stupor and respiratory depression. Symptoms may be delayed.

### 5. Fire-fighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Use extinguishing media appropriate for local surroundings

**Unsuitable extinguishing media** Water jets sprays

## **5.2 Special hazards arising from the substance or mixture**

**Special Hazard** Substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

**Hazardous Combustion Products** Hazardous decomposition products formed under fire conditions:  
Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Phosgene, Hydrogen chloride gas

## **5.3 Advice for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# **6. Accidental release measures**

## **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8. Avoid contact with skin and eyes and inhalation of vapours. Use personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment. In case of leak, wear a self-contained breathing apparatus.

## **6.2 Environmental Precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## **6.3 Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## **6.4 Reference to other sections**

Hazardous combustion products: see section 10. Personal Protective equipment: See section 8. Incompatible materials: see section 8. Incompatible Material: see section 10. Disposal Consideration: see section 13

# **7. Handling and Storage**

## **7.1 Precautions for Safe Handling**

### **7.1.1 Handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

### **7.1.2 Hygiene measures**

Take off immediately all contaminated clothing. Prohibit contact with skin and eyes and inhalation of vapours. When using do not eat, drink or smoke. Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

## **7.2 Conditions for safe storage, including any incompatibilities**

Keep tightly closed in a dry, cool and well-ventilated place. Store protected from moisture and heat. Protect against light. Keep away from heat and sources of ignition. Do not smoke. Provide a catch-tank in a bunded area. Provide impermeable floor.

Incompatible products: Bases, Acids, Oxidizing agents, Oxygen

### 7.3 Specific end uses

Laboratory chemical, Manufacture of substances.

## 8. Exposure Controls/ Personal Protection

### 8.1 Control Parameters

**Exposure Limits** Apply technical measures to comply with the occupational exposure

Component	European Union	The United Kingdom	France	Belgium
Chloroform (CAS : 67-66-3 )	TWA: 2 ppm 8 hr TWA: 10 mg/m <sup>3</sup> 8 hr Possibility of significant uptake through the skin	TWA: 2 ppm TWA: 9.9 mg/m <sup>3</sup> STEL: 6 ppm STEL: 29.7 mg/m <sup>3</sup>	TWA / VME: 2 ppm (8 heures). restrictive limit TWA / VME: 10 mg/m <sup>3</sup> (8 heures). restrictive limit STEL / VLCT: 50 ppm. STEL / VLCT: 250 mg/m <sup>3</sup> . Peau	TWA / VLA-ED: 2 ppm (8 horas) TWA / VLA-ED: 10 mg/m <sup>3</sup> (8 horas) Piel

**Derived No Effect level (DNEL)** No information available

**Predicted No Effect Concentration** No information available

### 8.2 Exposure Controls

**Appropriate Engineering Control** 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. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

### Personal protective equipment

**Eye protection**  
**Skin protection**  
**Hand protection**

Use tightly sealed safety glasses. (European Standard - EN 166)  
Impervious long-sleeved clothing. Preventative skin protection is recommended.  
Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Viton (R)	> 480 minutes	-	Level 6 EN 374	As tested under EN374-3 Determination of Resistance to Permeation by Chemicals
Neoprene	< 25 minutes	0.45 mm		
Butyl rubber	< 15 minutes	0.35 mm		

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitization effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

**Large Scale/emergency use**

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** low boiling organic solvent Type AX Brown conforming to EN371

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141  
 When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	Clear, colorless liquid	
<b>Physical state</b>	Liquid	
<b>Odor</b>	aromatic sweet	
<b>Odor threshold</b>	No information available	
<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
<b>pH</b>	No information available	
<b>Melting point/freezing point</b>	-63.5 °C	
<b>Boiling Point/Range</b>	61°C	
<b>Flash Point</b>	No information available	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	Not applicable	
<b>Flammability or explosive limits</b>		
<b>Upper</b>	No data available	
<b>Lower</b>	No data available	
<b>Relative Density</b>	1.49 g/cm <sup>3</sup> at 20°C	
<b>Vapor Density</b>	No information available	
<b>Vapor pressure (air = 1)</b>	209 hPa at 20°C	
<b>Water solubility</b>	8700 mg/L	
<b>Solubility in Other Solvents</b>	No information available	
<b>Partition coefficient: n-octanol/water</b>	Log Pow = 1.97 at 20°C	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Viscosity Kinematics</b>	No information available	
<b>Viscosity Dynamics</b>	0.56 mPa.s at 20°C.	
<b>Oxidizing properties</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Molecular Formula</b>	CHCl <sub>3</sub>	
<b>Molecular Weight</b>	119.38 g/mol	

### 9.2 OTHER INFORMATION

**VOC Content** No information available

## 10. Stability and Reactivity

### 10.1 Reactivity

None Known, based on information available.

### 10.2 Chemical stability

The product is stable under normal handling and storage conditions. Product is sensitive to light and moisture. (formation of hydrogen chloride gas)

### **10.3 Possibility of hazardous reaction**

Hazardous polymerization does not occur.

### **10.4 Conditions to avoid**

Heat, flames and sparks. Exposure to light. Exposure to moisture.

### **10.5 Incompatible Materials**

Acids (concentrated solutions), Strong acids, Oxygen, oxidizing agents (possible formation of: explosive compounds or those sensitive to impact), Finely divided metals, Aluminium, Magnesium, Zinc, Titanium (risk of explosion)

### **10.6 Hazardous Decomposition Products**

Hazardous decomposition products formed under fire conditions:  
Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Phosgene, Hydrogen chloride gas

## **11. Toxicological Information**

### **11.1 Information on Toxicological Effects**

#### **Acute toxicity**

#### **Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Chloroform (CAS: 67-66-3)	908 mg/kg	>3980 mg/kg	LOAEL = 59 mg/M <sup>3</sup>

Source: ECHA

#### **Local effect**

<b>Inhalation</b>	Toxic if inhaled
<b>Eye contact</b>	Causes serious eye irritation
<b>Skin contact</b>	Causes skin irritation
<b>Ingestion</b>	Harmful If swallowed

#### **Chronic toxicity**

<b>Skin Corrosion/Irritation</b>	Causes skin irritation
<b>Eye damage/irritation</b>	Causes serious eye irritation
<b>Sensitization</b>	Based on available information, the classification criteria are not met.
<b>Mutagenic effects</b>	Based on available information, the classification criteria are not met.
<b>Carcinogenic effects</b>	Suspected of causing cancer
<b>Reproductive effects</b>	Suspected of damaging the unborn child
<b>STOT - Single Exposure</b>	May cause respiratory irritation
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure. - Liver, Kidney
<b>Aspiration hazard</b>	Not classifiable

## **12. Ecological Information**

### **12.1 Ecotoxicity**

Chemical Name	Toxicity to Fish	Toxicity to Daphnia and other aquatic invertebrate	Toxicity to Algae
Chloroform (CAS: 67-66-3)	LC50: 28mg/l	EC50(48hr) : 152 mg/L	EC50(72hr) : 13.3 mg/L

Source: ECHA

## **12.2 Persistence and Degradability**

Persistence is unlikely to be based on available information.

## **12.3 Bioaccumulative Potential**

Bioconcentration factor (BCF): 13

Chloroform does not have significant bioaccumulative potential.

## **12.4 Mobility in Soil**

Product contains volatile organic compounds (VOC) which will evaporate easily from all the surfaces. Will likely be mobile in environment due to its mobility.

## **12.5 Results of PBT and vPvB Assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## **12.6 Other Adverse Effects**

No other adverse effects identified.

## **13. Disposal Considerations**

### **13.1 Waste Treatment Methods**

<b>Waste from Residues / Unused Products</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse empty containers. Dispose of this container to hazardous or special waste collection point.

## **14. Transport Information**

### **IMDG/IMO**

<b>UN-No</b>	UN 1888
<b>Proper Shipping name</b>	Chloroform
<b>Hazard class</b>	6.1
<b>Packing group</b>	III

### **IATA/ICAO**

<b>UN-No</b>	UN 1888
<b>Proper Shipping name</b>	Chloroform
<b>Hazard class</b>	6.1
<b>Packing group</b>	III

## **15. Regulatory Information**

### **15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

#### **International Inventories**

<b>TSCA</b>	Complies
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<b>EINECS/ ELINCS</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>PICCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>AICS</b>	Complies
<b>KECL</b>	Complies

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Chloroform (CAS 67-66-3)	-	Use restricted. See item 32. <a href="#">Substances restricted under REACH - ECHA (europa.eu)</a>	-

**Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals**

Component	ANNEX I - PART 1 List of chemicals subject to export notification procedure (referred to in Article 8)	ANNEX I - PART 2 List of chemicals qualifying for PIC notification (referred to in Article 11)	ANNEX I - PART 3 List of chemicals subject to the PIC procedure (referred to in Articles 13 and 14)
Chloroform (CAS 67-66-3)	-	Use restricted. See item 32. <a href="#">Substances restricted under REACH - ECHA (europa.eu)</a>	-

[EUR-Lex - 32012R0649 - EN - EUR-Lex \(europa.eu\)](#)

## **15.2 Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance.

## **16. Other Information**

### **Full text of H-Statements referred to under sections 2 and 3.**

<b>H302</b>	Harmful if swallowed
<b>H331</b>	Toxic if inhaled
<b>H315</b>	Causes skin irritation
<b>H319</b>	Causes serious eye irritation
<b>H351</b>	Suspected of causing cancer
<b>H361</b>	Suspected of damaging the unborn child
<b>H371</b>	Causes damage to organs (liver, kidneys) through prolonged or repeated exposure (Inhalation, Oral)

**Preparation Date** 27-October-2021

**Revision Date** 27-October-2021

**Revision Note** Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

**End of Safety Data Sheet**