

## SECTION 1: Identification

### 1.1. Identification

Product form	: Substance
Substance name	: Chloroform
CAS-No.	: 67-66-3
Product code	: LC13040
Formula	: CHCl <sub>3</sub>
Synonyms	: 1,1,1-trichloromethane / Chloroform / formyl trichloride / freon 20 / methane trichloride / methane, trichloro- / methenyl chloride / methenyl trichloride / methyl trichloride / R 20 / R 20 refrigerant / TCM (=trichloromethane) / trichloroform / trichloromethane

### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Bactericide Fumigant Insecticide Solvent Chemical substance for research
Recommended use	: Laboratory chemicals
Restrictions on use	: Not for food, drug or household use

### 1.3. Supplier

Sahastraa Exports Pvt Ltd  
Navkar Plaza 6th Floor, Bajaj Road Vile Parle West  
Mumbai – 400056 India  
+91 22 67879700 (100 Lines)  
info@sahastraa.com  
http://sahastraa.com

### 1.4. Emergency telephone number +91 22 67879700 (100 Lines)

#### GHS-US classification

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (inhalation) Category 3	H331	Toxic if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Carcinogenicity Category 2	H351	Suspected of causing cancer
Reproductive toxicity Category 2	H361	Suspected of damaging the unborn child.
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs (liver, kidneys) through prolonged or repeated exposure (Inhalation, oral)

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

#### GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: H302 - Harmful if swallowed  
H315 - Causes skin irritation

Precautionary statements (GHS US)	H319 - Causes serious eye irritation H331 - Toxic if inhaled H351 - Suspected of causing cancer H361 - Suspected of damaging the unborn child. H372 - Causes damage to organs (liver, kidneys) through prolonged or repeated exposure (Inhalation, oral)  : P201 - Obtain special instructions 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. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear eye protection, face protection, protective clothing, protective gloves. 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. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container to comply with local, state and federal regulations
-----------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Multi-constituent

Name	Product identifier	%	GHS-US classification
Chloroform (Main constituent)	(CAS-No.) 67-66-3	99	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
Ethanol (Distributor)	(CAS-No.) 64-17-5	1	Flam. Liq. 2, H225 Carc. 1A, H350 Repr. 2, H361

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not give milk/oil to drink. Do not induce vomiting. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital.

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Feeling of weakness. Dry/sore throat. Central nervous system depression. Headache. Nausea. Vomiting. Dizziness. Narcosis. Mental confusion. Drunkenness. Coordination disorders. Disturbances of consciousness. Disturbances of heart rate. Enlargement/affection of the liver. Affection of the renal tissue.

Symptoms/effects after skin contact : Red skin. Dry skin. Tingling/irritation of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Blisters.

Symptoms/effects after eye contact : Irritation of the eye tissue.

Symptoms/effects after ingestion : Risk of aspiration pneumonia. Irritation of the gastric/intestinal mucosa. Symptoms similar to those listed under inhalation.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Behavioural disturbances. Impaired concentration. Delusions. Gastrointestinal complaints. Degeneration of heart tissue. Enlargement/affection of the liver. Yellow skin. Affection of the renal tissue.

#### 4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : DIRECT FIRE HAZARD. Non-flammable. INDIRECT FIRE HAZARD. May build up electrostatic charges: risk of ignition. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard : INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".

Reactivity : Violent to explosive reaction with many compounds: release of heat. Decomposes slowly on exposure to light and on exposure to air: release of toxic and corrosive gases/vapours (phosgene, chlorine, hydrogen chloride). Reacts with (strong) oxidizers: release of toxic and corrosive gases/vapours (phosgene, chlorine).

#### 5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: consider evacuation.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Protective equipment : Gloves. Protective goggles. Head/neck protection. Protective clothing. Large spills/in enclosed spaces: gas-tight suit. Reactivity hazard: gas-tight suit. See "Material-Handling" to select protective clothing.

Emergency procedures : Keep upwind. Mark the danger area. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames. Keep containers closed. Protect substance against light. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation. In case of reactivity hazard: consider evacuation.

##### For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Stop leak if safe to do so. Ventilate area.

#### 6.2. Environmental precautions

Prevent spreading in sewers.

### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Provide equipment/receptacles with earthing. Dilute narcotic gases/vapours with water spray. If reacting: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.
- Methods for cleaning up : Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Use earthed equipment. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

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

- Storage conditions : Keep container tightly closed.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. strong acids. (strong) bases.
- Storage area : Store in a dark area. Ventilation at floor level. Fireproof storeroom. Provide for a tub to collect spills. Provide the tank with earthing. Unauthorized persons are not admitted. Store only in a limited quantity. Meet the legal requirements. Store at ambient temperature.
- Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: metal. steel. stainless steel. iron. glass. tin. MATERIAL TO AVOID: aluminium. copper.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Chloroform (67-66-3)</b>		
ACGIH	ACGIH TWA (ppm)	10 ppm (Chloroform; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	9.78 mg/m <sup>3</sup> 60 min.
NIOSH	NIOSH REL (STEL) (ppm)	2 ppm 60 min.
<b>Ethanol (64-17-5)</b>		
ACGIH	ACGIH STEL (ppm)	1000 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Gas mask. Gloves. Safety glasses.



#### Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: PVA. viton. GIVE GOOD RESISTANCE: No data available. GIVE LESS RESISTANCE: chlorinated polyethylene. neoprene. nitrile rubber. polyethylene. neoprene/natural rubber. nitrile rubber/PVC. GIVE POOR RESISTANCE: butyl rubber. natural rubber. PVC. styrene-butadiene rubber. neoprene/SBR

#### Hand protection:

Gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Head/neck protection. Protective clothing

#### Respiratory protection:

Gas mask with filter type AX at conc. in air > exposure limit. High vapour/gas concentration: self-contained respirator

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
	: Colourless
	: Sweet odour Ether-like odour
Odor threshold	: 133 - 276 ppm 648 - 1344 mg/m <sup>3</sup>
pH	: No data available
Melting point	: -64 °C
Freezing point	: No data available
Boiling point	: 61 °C
Critical temperature	: 263 °C
Critical pressure	: 54702 hPa
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: 11.6
Relative evaporation rate (ether=1)	: 1.9
Flammability (solid, gas)	: No data available
Vapor pressure	: 209.5 hPa (20 °C)
Relative vapor density at 20 °C	: 4.1
Relative density	: 1.49 (20 °C)
Relative density of saturated gas/air mixture	: 1.7
Specific gravity / density	: 1490 kg/m <sup>3</sup> (20 °C)
Molecular mass	: 119.38 g/mol

Solubility	: Poorly soluble in water. Substance sinks in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in oil. Soluble in carbondisulfide. Soluble in petroleum spirit. Soluble in naphtha. Soluble in tetrachloromethane. Water: 0.87 g/100ml (23 °C, poorly soluble) Ethanol: soluble Ether: soluble Acetone: soluble
Log Pow	: 1.97 (Experimental value; 20 °C)
Auto-ignition temperature	: > 600 °C (1013 hPa)
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

## 9.2. Other information

Specific conductivity	: < 10000 pS/m
Saturation concentration	: 1045 g/m <sup>3</sup>
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Volatile. No data available. May generate electrostatic charges.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Violent to explosive reaction with many compounds: release of heat. Decomposes slowly on exposure to light and on exposure to air: release of toxic and corrosive gases/vapours (phosgene, chlorine, hydrogen chloride). Reacts with (strong) oxidizers: release of toxic and corrosive gases/vapours (phosgene, chlorine).

### 10.2. Chemical stability

Unstable on exposure to light. Unstable on exposure to air.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Direct sunlight. Air contact.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Chlorine.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure	: Inhalation; Skin and eye contact
Acute toxicity	: Not classified

<b>Chloroform (67-66-3)</b>	
LD50 oral rat	695 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 908 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value; 1117 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit; No reliable data available; >3980 mg/kg bodyweight; Rabbit)
ATE US (oral)	695 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h
<b>Ethanol (64-17-5)</b>	
LD50 oral rat	10740 mg/kg (Rat; Experimental value,Rat; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit, Literature study, Dermal)



<b>Ethanol (64-17-5)</b>	
LC50 inhalation rat (mg/l)	117 - 125 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation)
ATE US (oral)	10740 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.

<b>Chloroform (67-66-3)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>Chloroform (67-66-3)</b>	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity	: Suspected of damaging the unborn child.
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Causes damage to organs (liver, kidneys) through prolonged or repeated exposure (Inhalation, oral).
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: Feeling of weakness. Dry/sore throat. Central nervous system depression. Headache. Nausea. Vomiting. Dizziness. Narcosis. Mental confusion. Drunkenness. Coordination disorders. Disturbances of consciousness. Disturbances of heart rate. Enlargement/affection of the liver. Affection of the renal tissue.
Symptoms/effects after skin contact	: Red skin. Dry skin. Tingling/irritation of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Blisters.
Symptoms/effects after eye contact	: Irritation of the eye tissue.
Symptoms/effects after ingestion	: Risk of aspiration pneumonia. Irritation of the gastric/intestinal mucosa. Symptoms similar to those listed under inhalation.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Behavioural disturbances. Impaired concentration. Delusions. Gastrointestinal complaints. Degeneration of heart tissue. Enlargement/affection of the liver. Yellow skin. Affection of the renal tissue.

## SECTION 12: Ecological information

### Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/l.
Ecology - water	: Groundwater pollutant. Harmful to fishes. Harmful to invertebrates (Daphnia). Harmful to algae.

<b>Chloroform (67-66-3)</b>	
LC50 fish 1	18.2 ppm (LC50; ASTM; 96 h; Oncorhynchus mykiss; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 2	152.5 mg/l (EC50; US EPA; 48 h; Daphnia magna; Static system; Salt water; Experimental value)
<b>Ethanol (64-17-5)</b>	
LC50 fish 1	14200 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)

### Persistence and degradability

<b>Chloroform (67-66-3)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Low potential for adsorption in soil.
ThOD	0.33 - 1.35 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.015 - 0.06

<b>Ethanol (64-17-5)</b>	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.7 g O <sub>2</sub> /g substance
ThOD	2.1 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.43

#### Bioaccumulative potential

<b>Chloroform (67-66-3)</b>	
BCF fish 2	1.4 - 4.7 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 42 days; Cyprinus carpio; Flow-through system; Fresh water; Experimental value)
Log Pow	1.97 (Experimental value; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>Ethanol (64-17-5)</b>	
BCF fish 1	1 (Other, 72 h, Cyprinus carpio, Static system, Fresh water, Read-across)
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

#### Mobility in soil

<b>Chloroform (67-66-3)</b>	
Surface tension	0.0271 N/m (20 °C)
Log Koc	Koc,Other; 86.7-367; Experimental value; log Koc; Other; 1.94-2.56; Experimental value
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
<b>Ethanol (64-17-5)</b>	
Surface tension	0.022 N/m (20 °C)
Ecology - soil	Highly mobile in soil.

#### Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Dissolve or mix with a combustible solvent. Remove to an incinerator for chlorinated waste materials with energy recovery. Do not discharge into drains or the environment. Do not discharge into surface water (Directive 2000/60/EC, Council Decision 2455/2001/EC).
Additional information	: LWCA (the Netherlands): KGA category 04. Hazardous waste according to Directive 2008/98/EC.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT	
Transport document description	: UN1888 Chloroform, 6.1, III
UN-No.(DOT)	: UN1888
Proper Shipping Name (DOT)	: Chloroform
Packing group (DOT)	: III - Minor Danger



Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
 DOT Packaging Bulk (49 CFR 173.xxx) : 241  
 DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
 N36 - Aluminum or aluminum alloy construction materials are permitted only for halogenated hydrocarbons that will not react with aluminum.  
 T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
 TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
 DOT Packaging Exceptions (49 CFR 173.xxx) : 153  
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L  
 DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
 DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"  
 Other information : No supplementary information available.

#### Transportation of Dangerous Goods

Transport document description : UN1888 CHLOROFORM, 6.1, III  
 UN-No. (TDG) : UN1888  
 Proper Shipping Name (Transportation of Dangerous Goods) : CHLOROFORM  
 TDG Primary Hazard Classes : 6.1 - Class 6.1 - Toxic Substances  
 Packing group : III - Minor Danger  
 Explosive Limit and Limited Quantity Index : 5 L  
 Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 60 L

#### Transport by sea

Transport document description (IMDG) : UN 1888 , 6.1, III  
 UN-No. (IMDG) : 1888  
 Class (IMDG) : 6.1 - Toxic substances  
 Packing group (IMDG) : III - substances presenting low danger  
 EmS-No. (1) : F-A  
 EmS-No. (2) : S-A

#### Air transport

Transport document description (IATA) : UN 1888 , 6.1, III  
 UN-No. (IATA) : 1888  
 Class (IATA) : 6 -  
 Packing group (IATA) : III - Minor Danger

## SECTION 15: Regulatory information

### US Federal regulations

<b>Chloroform (67-66-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Carcinogenicity Health hazard - Reproductive toxicity Health hazard - Serious eye damage or eye irritation Health hazard - Skin corrosion or Irritation Health hazard - Specific target organ toxicity (single or repeated exposure)
SARA Section 313 - Emission Reporting	0.1 %

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Chloroform	CAS-No. 67-66-3	99%
------------	-----------------	-----

<b>Chloroform (67-66-3)</b>	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Carcinogenicity Health hazard - Reproductive toxicity Health hazard - Serious eye damage or eye irritation Health hazard - Skin corrosion or Irritation Health hazard - Specific target organ toxicity (single or repeated exposure)
SARA Section 313 - Emission Reporting	0.1 %

### International regulations

#### CANADA

<b>Chloroform (67-66-3)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Chloroform (67-66-3)</b>
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

<b>Chloroform (67-66-3)</b>
Listed on the Canadian IDL (Ingredient Disclosure List)
<b>Chloroform (67-66-3)</b>
Listed on the Canadian IDL (Ingredient Disclosure List)
<b>Ethanol (64-17-5)</b>
Listed on IARC (International Agency for Research on Cancer)

### 15.3. US State regulations

Chloroform (67-66-3)	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
No significant risk level (NSRL)	20 µg/day

This product can expose you to Chloroform, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chloroform (67-66-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	20 µg/day

## SECTION 16: Other information

Full text of H-phrases: see section 16:

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H350	May cause cancer
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure

NFPA health hazard

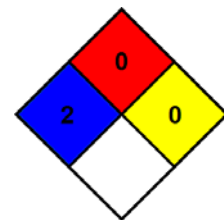
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur  
 Flammability : 0 Minimal Hazard - Materials that will not burn  
 Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: H  
 H - Splash goggles, Gloves, Synthetic apron, Vapor respirator



**Regd. Off.:** Navkar Plaza, 6th Floor,  
Bajaj Road, Vile Parle (W), Mumbai - 56. INDIA  
Tel. : +91 022 6787 9700 (100 Lines), Fax : +91 022 6679 3257  
E-mail : [info@sahastraa.com](mailto:info@sahastraa.com), website : [www.sahastraa.com](http://www.sahastraa.com)

End of msds