 <b>LABORATORY REAGENTS &amp; FINE CHEMICALS</b>	<b>SAFETY DATA SHEET SDS/MSDS</b>	Revised edition no : 0
		Date : 25 / 11 / 2015
		Supersedes : 0 / 0 / 0
	<b>2,2,2-Trichloroethyl chloroformate</b>	<b>6357P</b>

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

### 1.1 Product identifiers

Product name : 2,2,2-Trichloroethyl chloroformate  
 Product Number : 6357P  
 CAS-No. : 17341-93-4  
 Molecular formula : C<sub>3</sub>H<sub>2</sub>Cl<sub>4</sub>O<sub>2</sub>

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

### 1.3 Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.  
 107 Wode House Road, Jehangir Villa, Colaba  
 400005 Mumbai INDIA  
 Contact: +91 22 6663 6663 / Fax +91 22 6663 6699 / info@lobachemie.com  
 Safety Officer: + 91 98213 31336 / + 91 98214 86040 / safety@lobachemie.com

### 1.4 Emergency telephone number

+ 91 22 6663 6663 (9:00am - 6:00 pm) [Office hours]

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Inhalation (Category 3), H331

Skin corrosion (Category 1B), H314

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

#### Classification according to EU Directives 67/548/EEC or 1999/45/EC

T Toxic R23, R34


For the full text of the R-phrases mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labeling according Regulation (EC) No 1272/2008 [CLP]

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**Hazard pictograms:**

<b>Signal word</b>	:	<b>Danger</b>
<b>Hazard statement(s)</b>	:	
H314	:	Causes severe skin burns and eye damage.
H331	:	Toxic if inhaled.
P261	:	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280	:	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	:	Immediately call a POISON CENTER or doctor/ physician.
<b>Supplemental Hazard Statements</b>	:	None
<b>R-phrase(s)</b>	:	
R23	:	Toxic by inhalation.
R34	:	Causes burns.
<b>S-phrase(s)</b>	:	
S26	:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	:	Wear suitable protective clothing, gloves and eye/face protection.
S45	:	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**2.3 Other hazards**

None


**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Substances / Preparation</b>	<b>Substance</b>	<b>CAS No.</b>	<b>EC No.</b>
<b>Substance Name</b>	<b>Content</b>		
2,2,2-Trichloroethyl chloroformate	100%	17341-93-4	241-363-7

**4. FIRST AID MEASURES****LOBA CHEMIE PVT.LTD.****In case of emergency: + 91 22 6663 6663 (9:00am - 6:00 pm)**

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**For emergency responders:** Equip cleanup crew with proper protection. Ventilate area.  
**For non-emergency personnel:** Evacuate unnecessary personnel.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

### **6.4 Reference to other sections**

For disposal see section 13.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

**Handling:** Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

**Technical protective measures:** Provide good ventilation in process area to prevent formation of vapour.

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

**Storage :** Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.  
 Recommended storage temperature: 2 - 8 °C

**Storage - away from :** Strong bases. Strong acids. Sources of ignition. Direct sunlight.

### **7.3 Specific end uses**

No data available


## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

No data available.

### **8.2 Exposure controls**

Engineering measures

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Technical measures & appropriate working operations should be given priority over the use of personal protective equipments.

#### Individual protection measures

<b>Personal protection</b>	:	Avoid all unnecessary exposure.
• <b>Respiratory protection</b>	:	Wear approved mask.
• <b>Hand protection</b>	:	Wear protective gloves.
• <b>Eye protection</b>	:	Chemical goggles or safety glasses.
• <b>Others</b>	:	When using, do not eat, drink or smoke.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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



a) Appearance Form	:	Liquid
b) Colour	:	Clear light yellow color liquid
c) Odour	:	Odourless
c) Odour Threshold	:	No data available
d) pH	:	No data available
e) Melting point	:	No data available
f) Boiling point / Boiling range	:	171-172°C
g) Flash point	:	No data available
h) Evaporation rate	:	No data available
i) Flammability (solid, gas)	:	No data available
j) Upper/lower flammability or explosive limits	:	
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
k) Vapour pressure	:	No data available
l) Vapour density	:	No data available
m) Relative density	:	1.539 g/cm <sup>3</sup> at 25 °C
n) Water solubility	:	No data available
o) Partition coefficient n-Octanol/water	:	No data available
p) Autoignition temperature	:	No data available
q) Decomposition temperature	:	No data available
r) Viscosit	:	No data available
s) Explosive properties	:	No data available
t) Oxidizing properties	:	No data available

#### 9.2 Other safety information

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No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight

### 10.5 Incompatible materials

Oxidizing agents, Alkali metals, Powdered metals, Ammonia, Organic materials, Peroxides

### 10.6 Hazardous decomposition products

No data available

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity :** No data available

**Skin corrosion/irritation :** No data available

**Serious eye damage/eye irritation:** No data available

**Respiratory or skin sensitization:** No data available

**Germ cell mutagenicity:** No data available

#### **Carcinogenicity**

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity :** No data available

**Specific target organ toxicity - single exposure:** No data available

**Specific target organ toxicity - repeated exposure:** No data available



**Aspiration hazard:** No data available

### **Additional Information**

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**RTECS: Not available**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

Biodegradable

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical as safety assessments not required / not conducted.

### 12.6 Other adverse effects

No ecological problems are to be expected when the product is handled and used with due care and attention.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**General** : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

## 14. TRANSPORT INFORMATION

### 14.1. Land transport (ADR-RID)

**Proper shipping name** : CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S. (2,2,2-Trichloroethyl chloroformate)

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