

### SECTION-1: Identification of the substance / mixture and the company / undertaking

<b>Catalogue Number</b>	CS-O-57529
<b>Product Name</b>	ISOPROPYL CHLOROFORMATE SOLUTION 1.0 M IN TOLUENE
<b>CAS No.</b>	108-23-6
<b>Category</b>	Fine Chemicals
<b>Synonyms</b>	1-Methylethyl chloroformate; 2-Propyl chloroformate; Chloroformic acid isopropyl ester
<b>Brand</b>	Clearsynth Labs Ltd.
<b>Identified uses</b>	Laboratory Chemicals
<b>Uses advised against</b>	Not available
<b>Company</b>	Clearsynth Labs Ltd. Mumbai, India
<b>Emergency Phone #</b>	+91-22-245045900
<b>REACH No.</b>	Not available

### SECTION 2: Hazards identification

**Disclaimer:** This is sample MSDS. Please email [sales@clearsynth.com](mailto:sales@clearsynth.com) for more details.

#### 2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)

Acute toxicity (Category 4)

#### 2.2 Label Elements

**Signal Word:** Warning



#### Hazard Statement(s)

Code	Statement
H225	Not available
H302	Harmful if swallowed.
H314	Not available

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Not available
H371	Not available

**Precautionary Statement(s)**

Code	Statement
P210	Not available
P233	Not available
P240	Not available
P241	Not available
P242	Not available
P243	Not available
P260	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P264+P265	Not available
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P272	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Not available
P301+P317	Not available
P301+P330+P331	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P302+P361+P354	Not available
P303+P361+P353	Not available
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338	Not available

P316	Not available
P317	Not available
P320	Not available
P321	Specific treatment (see ... on this label).
P330	Not available
P332+P317	If skin irritation occurs: Get medical help.
P333+P317	Not available
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Not available
P370+P378	Not available
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Not available
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation
P308+P316	Not available

### SECTION 3: Composition / information on ingredients

#### 3.1 Substance

Component : ISOPROPYL CHLOROFORMATE SOLUTION 1.0 M IN TOLUENE

CAS Number : 108-23-6

Molecular Formula : C<sub>4</sub>H<sub>7</sub>ClO<sub>2</sub>

Molecular Weight : 122.55

Parent Chemical : -

Synonyms : 1-Methylethyl chloroformate; 2-Propyl chloroformate; Chloroformic acid isopropyl ester

Concentration : Not available

### SECTION 4: First aid measures

#### SECTION 4: First-aid measures

##### 4.1 Description of first aid measures

General advice:

- Remove contaminated clothing and shoes. Seek medical attention if symptoms persist.
- Show this SDS to the physician in attendance.

Inhalation:

- Move person to fresh air. Keep at rest in a position comfortable for breathing.
- If breathing is difficult, seek medical attention.

#### Skin contact:

- Wash immediately with plenty of soap and water.
- Seek medical attention if irritation, pain, or redness develops or persists.

#### Eye contact:

- Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
- Continue rinsing and obtain medical attention.

#### Ingestion:

- Rinse mouth. Do NOT induce vomiting.
- Never give anything by mouth to an unconscious person.
- Seek immediate medical attention.

#### 4.2 Most important symptoms and effects, both acute and delayed

- Not available.

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

- Treat symptomatically.
- Not available.

## SECTION 5: Firefighting measures

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media:

- Dry chemical, carbon dioxide (CO<sub>2</sub>), alcohol-resistant foam.
- Water spray may be used to cool containers.

##### Unsuitable extinguishing media:

- Not available.

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

- Flammable liquid/solution (toluene solvent).
- Vapors may form explosive mixtures with air.
- Thermal decomposition may produce corrosive and/or toxic fumes.
- Not available (specific decomposition products).

#### 5.3 Advice for firefighters

- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Fight fire from a safe distance; use water spray to cool unopened containers.
- Prevent fire-fighting water from entering drains or waterways.

## SECTION 6: Accidental release measures

### SECTION 6: Accidental release measures

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

- Evacuate unnecessary personnel; ensure adequate ventilation.
- Eliminate all ignition sources. Avoid breathing vapors/mist.
- Wear appropriate PPE (chemical-resistant gloves, protective clothing, eye/face protection).

### 6.2 Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Avoid release to the environment. Prevent entry into drains, surface water, and soil.

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

- Contain spill with inert absorbent material (e.g., sand, silica gel, universal binder).
- Collect into suitable, closed, labeled containers for disposal.
- Clean spill area with appropriate solvent/cleaning method; avoid generating vapors.

### 6.4 Reference to other sections

- For personal protective equipment see Section 8.
- For disposal considerations see Section 13.

## SECTION-7: Handling and storage

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- Handle in a fume hood or with local exhaust ventilation.
- Avoid contact with skin and eyes; avoid breathing vapors/mist.
- Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
- Use non-sparking tools and explosion-proof equipment where applicable.
- Keep container tightly closed when not in use.

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

- Store in a cool, dry, well-ventilated area.
- Keep away from ignition sources.
- Store in tightly closed container.
- Incompatibilities: Not available.

#### 7.3 Specific end use(s)

- Fine chemical / laboratory use. Not available (specific uses).

## SECTION 8: Exposure controls / personal protection

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational exposure limits:

- Not available (for isopropyl chloroformate).
- Not available (for solution components; consult applicable local regulations).

#### 8.2 Exposure controls

##### Engineering controls:

- Use local exhaust ventilation or fume hood.
- Provide eyewash station and safety shower.

##### Personal protective equipment (PPE):

##### Eye/face protection:

- Safety glasses with side shields or chemical splash goggles.

##### Skin protection:

- Wear chemical-resistant gloves.
- Wear protective clothing appropriate to the risk of exposure.

Respiratory protection:

- If ventilation is inadequate, use appropriate respiratory protection.

Hygiene measures:

- Wash hands thoroughly after handling.
- Remove contaminated clothing and wash before reuse.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available

Property	Value
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

### SECTION 10: Stability and reactivity

#### SECTION 10: Stability and reactivity

##### 10.1 Reactivity

- Not available.

##### 10.2 Chemical stability

- Stable under recommended storage conditions.

##### 10.3 Possibility of hazardous reactions

- Not available.

##### 10.4 Conditions to avoid

- Heat, flames, sparks, and other ignition sources.

- Exposure to moisture/humidity: Not available.

##### 10.5 Incompatible materials

- Not available.

##### 10.6 Hazardous decomposition products

- Not available.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

- Acute toxicity: SUMMARY TOXICITY STATEMENT: HIGH IRRITANT VIA INHALATION. HIGH= CAPABLE OF CAUSING DEATH OR PERMANENT INJURY DUE TO EXPOSURES OF NORMAL USE; INCAPACITATING & POISONOUS; REQUIRES SPECIAL HANDLING. SUMMARY TOXICITY STATEMENT: MODERATE VIA ORAL ROUTES. MODERATE= MAY CAUSE REVERSIBLE OR IRREVERSIBLE CHANGES TO EXPOSED TISSUE, NOT PERMANENT INJURY OR DEATH; CAN CAUSE CONSIDERABLE DISCOMFORT.

- Skin corrosion/irritation: No data available.

- Serious eye damage/eye irritation: EYE IRRITATION, IRRITATION OF UPPER RESP TRACT, & SURFACE BURNS HAVE BEEN PRINCIPAL FINDINGS IN EXPOSED HUMANS. ... EYE IRRITATION MAY PERSIST SOME TIME AFTER EXPOSURE CEASES. SKIN SENSITIZATION MAY OCCUR. /CHLOROFORMATES/ EYE IRRITATION, IRRITATION OF UPPER RESP TRACT, & SURFACE BURNS HAVE BEEN PRINCIPAL FINDINGS IN EXPOSED HUMANS. ... EYE IRRITATION MAY PERSIST SOME TIME AFTER EXPOSURE CEASES. SKIN SENSITIZATION MAY OCCUR. /CHLOROFORMATES/

- Respiratory or skin sensitization: EYE IRRITATION, IRRITATION OF UPPER RESP TRACT, & SURFACE BURNS HAVE BEEN PRINCIPAL FINDINGS IN EXPOSED HUMANS. ... EYE IRRITATION MAY PERSIST SOME TIME AFTER EXPOSURE CEASES. SKIN SENSITIZATION MAY OCCUR. /CHLOROFORMATES/ EYE IRRITATION, IRRITATION OF UPPER RESP TRACT, & SURFACE BURNS HAVE BEEN PRINCIPAL FINDINGS IN EXPOSED HUMANS. ... EYE IRRITATION MAY PERSIST SOME TIME AFTER EXPOSURE CEASES. SKIN

### SENSITIZATION MAY OCCUR. /CHLOROFORMATES/

- Germ cell mutagenicity: No data available.
- Carcinogenicity: No data available.
- Reproductive toxicity: No data available.
- STOT-single exposure: No data available.
- STOT-repeated exposure: No data available.
- Aspiration hazard: No data available.

Likely routes of exposure

- TOXIC BY INHALATION.

Symptoms related to the physical, chemical and toxicological characteristics

- Burning sensation. Cough. Laboured breathing. Shortness of breath. Sore throat. Symptoms may be delayed.

## SECTION 12: Ecological information

### SECTION 12: Ecological information

#### 12.1 Toxicity

- No data available.

#### 12.2 Persistence and degradability

- No data available.

#### 12.3 Bioaccumulative potential

- No data available.

#### 12.4 Mobility in soil

- No data available.

#### 12.5 Results of PBT and vPvB assessment

- Not available.

#### 12.6 Endocrine disrupting properties

- Not available.

#### 12.7 Other adverse effects

- No data available.

## SECTION 13: Disposal considerations

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Product/Residues:

- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains.

Contaminated packaging:

- Dispose of as hazardous waste in accordance with applicable regulations.

Waste code:

- Not available.

### SECTION 14: Transport information

#### SECTION 14: Transport information

- Transport classification for this product/mixture: Not available.

##### 14.1 UN number

- Not available.

##### 14.2 UN proper shipping name

- Not available.

##### 14.3 Transport hazard class(es)

- Not available.

##### 14.4 Packing group

- Not available.

##### 14.5 Environmental hazards

- Not available.

##### 14.6 Special precautions for user

- Not available.

##### 14.7 Maritime transport in bulk according to IMO instruments

- Not available.

### SECTION 15: Regulatory information

#### SECTION 15: Regulatory information

##### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Not available.

##### 15.2 Chemical safety assessment

- Not available.

### SECTION 16: Other information

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##### Product identifier:

- Product name: ISOPROPYL CHLOROFORMATE SOLUTION 1.0 M IN TOLUENE

- Catalog No.: CS-O-57529

- CAS No.: 108-23-6

- Synonyms: 1-Methylethyl chloroformate; 2-Propyl chloroformate; Chloroformic acid isopropyl ester

##### Supplier:

- Clearsynth Labs Ltd., Mumbai, India

- Emergency phone: +91-22-245045900

##### Revision information:

- Not available.

**Disclaimer:**

- The information provided is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. No warranty is expressed or implied.

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