


Section 1. Product and Company Identification

**Product Name** Isobutyl Chloroformate  
**CAS Number** 543-27-1

**Parchem - fine & specialty chemicals**

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EMERGENCY RESPONSE NUMBER  
CHEMTEL

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All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 3 H226 Flammable liquid and vapor.

Acute Tox. 2 H330 Fatal if inhaled

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Acute Tox. 4 H302 Harmful if swallowed.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

T; Toxic

R23: Toxic by inhalation.

C; Corrosive

R34: Causes burns.

Xn; Harmful

R22: Harmful if swallowed.

R10: Flammable.

**Information concerning particular hazards for human and environment:** Not applicable

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER



## Hazard and precautionary statements

### Hazard Statements

H226 Flammable liquid and vapor.  
H302 Harmful if swallowed.  
H330 Fatal if inhaled.  
H314 Causes severe skin burns and eye damage.

### Precautionary Statements

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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.  
P320 Specific treatment is urgent (see on this label).  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

### Other Hazards

#### Results of PBT and vPvB assessment

**PBT:** Not applicable.  
**vPvB:** Not applicable

## Section 3. Composition / Information on Ingredients

<b>Common Name</b>	Isobutyl Chloroformate
<b>CAS Number</b>	543-27-1

## Section 4. First Aid Measures

### Description of first-aid measures

**General information:** Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Remove breathing equipment only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.

**Inhalation:** Supply fresh air or oxygen; call for doctor. In case of unconsciousness place patient stably in side position for transportation.

**Skin contact:** Immediately wash with water and soap and rinse thoroughly.

**Eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**Ingestion:** Call for a doctor immediately. Drink plenty of water and provide fresh air. Call for a doctor immediately.



### Information for doctor

**Most important symptoms and effects, both acute and delayed:** No further relevant information available.

**Indication of any immediate medical attention and special treatment needed:** No further relevant information available

### Section 5. Firefighting Measures

#### Extinguishing media

**Suitable extinguishing agents:** CO<sub>2</sub>, powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture:** No further relevant information available.

#### Advice for firefighters

**Protective equipment:** Mouth respiratory protective device.

### Section 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Wear protective equipment. Keep unprotected persons away.

**Environmental precautions:** No special measures required.

**Methods and material for containment and cleaning up:** Use neutralizing agent. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

#### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### Section 7. Handling and Storage

#### Handling

**Precautions for safe handling:** Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care.

**Information about fire and explosion protection:** Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available.

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

##### Storage

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep container tightly sealed.

Section 8. Exposure Controls / Personal Protection

**Additional information about design of technical facilities:** No further data; see item 7.

**Control parameters**

**Ingredients with limit values that require monitoring at the workplace:** Not required.

**Additional information:** The lists valid during the making were used as basis.

**Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately.

Avoid contact with the eyes and skin.

**Respiratory protection:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**Protection of hands:** Protective gloves

The glove material has to be impermeable and resistant to the product/the substance/the preparation. Due to missing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves:** The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material:** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles

Section 9. Physical and Chemical Properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:** Liquid

**Color:** Colorless

**Odor:** Characteristic

**Odor Threshold:** Not determined.

**pH Value:** Acidic

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 128.8°C

**Flash point:** 36°C

**Ignition temperature:** Not determined.

**Decomposition temperature:** Not determined.

**Self-igniting:** Not determined.



**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

**Explosion limits**

**Lower:** Not determined.

**Upper:** Not determined.

**Vapor pressure:** Not determined.

**Density (20°C):** 1.04 g/cm<sup>3</sup>

**Relative density:** Not determined.

**Vapor density:** Not determined.

**Evaporation rate:** Not applicable.

**Solubility in / Miscibility with water:** Hydrolyzed.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

**Other information:** No further relevant information available.

Section 10. Stability and Reactivity

**Reactivity**

**Chemical stability**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions:** No dangerous reactions known.

**Conditions to avoid:** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known

Section 11. Toxicological Information

**Information on toxicological effects**

**Acute toxicity:**

**Primary irritant effect:**

**on the skin:** Caustic effect on skin and mucous membranes.

**on the eye:** Strong caustic effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:** Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Section 12. Ecological Information

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

**Behavior in environmental systems**

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

**Additional ecological information**

**General notes:** Must not reach sewage water or drainage ditch undiluted or unneutralized.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects:** No further relevant information available.

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**Land transport ADR/RID (Cross-border)**

**ADR/RID class:** 6.1 Toxic substances.

**Danger code (Kemler):** 63

**UN-Number:** 2742

**Packaging group:** II

**Hazard label:** 6.1+3

**UN proper shipping name:** 2742 Chloroformates, Toxic, Corrosive, Flammable, N.O.S.  
(Isobutyl chloroformate)

**Tunnel restriction code:** D/E

**Maritime transport IMDG**

**IMDG Class:** 6.1

**UN Number:** 2742

**EMS Number:** F-E, S-C

**Marine pollutant:** No

**Segregation groups:** Acids

**Proper shipping name:** Chloroformates, Toxic, Corrosive, Flammable, N.O.S. (Isobutyl chloroformate)



**Air Transport ICAO-TI and IATA-DGR**

**ICAO/IATA Class:** 6.1

**UN/ID Number:** 2742

**Proper shipping name:** Chloroformates, Toxic, Corrosive, Flammable, N.O.S. (Isobutyl chloroformate)

**UN "Model Regulation":** UN2742, Chloroformates, Toxic, Corrosive, Flammable, N.O.S., 6.1 (3), II

**Special precautions for user Warning:** Toxic substances.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

Section 15. Regulatory Information

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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