



Material Safety Data Sheet

ISOBUTYRYL CHLORIDE

Section 1 - Product and Company Information

Substance : Isobutyryl Chloride
Trade Name : Isobutyryl Chloride
Chemical family : Acid Chloride
Company : Shiva Pharmachem Pvt. Ltd.
Plot No. 588,
Village Luna – 391440
Taluka: Padra,
District: Vadodara, Gujarat,
India.
Phone No. : +91 2662-221021 / 224360
Fax No. : +91 2662 223314

Section 2 – Composition / Information on Ingredients

Product Name	CAS No.	EC NO.	Mol. Formula	Mol. Weight.
Isobutyryl Chloride	79-30-1	201-194-1	C ₄ H ₇ ClO	106.55 g/mol

Section 3 – Hazards Identification

Special Indication of Hazards to Humans and the Environment

Highly Flammable.
Causes severe burns.

Section 4 – First Aid Measures

Inhalation

If inhaled, remove to fresh air, If Not breathing give artificial respiration. If breathing is difficult, give oxygen.

Skin Contact

In Case of skin contact, flush with copious amounts of water for at least 15 minute.
Remove contaminated clothing and shoes. Call a Physician.

Eye Contact

In Case of contact with eyes, flush with copious amounts of water for at least 15 minutes.
Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Ingestion

If Swallowed, wash out mouth with water provided person is conscious. Call a physician immediately



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Section 5 – Fire Fighting Measures

Extinguishing Media

Suitable: For Small Fires, Use media such as “alcohol resistant” foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special Risks

Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire condition.

Explosion Hazards: Vapor may travel considerable distance to source of ignition and flash back.

Container explosion may occur under fire conditions.

Special Protective equipment for Fire Fighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 – Accidental Release Measures

Personal precaution procedures to be followed in case of leak or spill

Evacuate area. Shut off all sources of ignition. Use non sparking tools.

Procedures(s) of personal precaution(s)

Wear self- contained breathing apparatus, rubber boots and heavy rubber gloves.

Methods for cleaning UP

Cover with dry lime or soda ash, pick up, keep in a closed container and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling

Directions for safe Handling: Do Not Breathe vapor. Do not allow to get in eyes, on skin and on clothing. Avoid prolonged or repeated exposure.

Storage

Conditions of Storage: Keep tightly closed. Keep away from heat and open flame. Store in a cool dark & dry place.

Special Requirements

Moisture Sensitive

Section 8 – Exposure Controls / Personal protection

Engineering Controls

Safety Shower and eye bath.

Use non sparking Tools

Use only in a Chemical fume hood



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General Hygiene Measures

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Personal Protective Equipment

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, Use a full face supplied air respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

Special Protective Measures: Face Shield (8-inch Minimum).

Section 9 – Physical and Chemical Properties

Appearance Physical State	: Liquid
Color	: Colorless
Odor	: Stench
Property	: Value at Temperature or Pressure
PH	: N/A
BP/BP Range	: 91.0-93.0 °C
MP/MP Range	: -90.0 °C
Flash Point	: 8 °C Method: closed cup
Flammability	: N/A
Autoignition Temp	: 325 °C
Oxidizing Properties	: N/A
Explosive Properties	: N/A
Explosion Limits Lower	: 2.1 %
Upper	: 8.2 %
Vapor Pressure	: 53.2 mmHg at 20 °C
SG/Density	: 1.02 g/cm ³ at 20 °C
Partition Coefficient	: N/A
Viscosity	: 0.55 Pas at 20 °C
Vapor Density	: N/A
Saturated Vapor Conc.	: N/A
Evaporation Rate	: N/A
Bulk Density	: N/A
Decomposition Temp.	: N/A
Solvent Content	: N/A
Water Content	: N/A
Surface Tension	: N/A
Conductivity	: N/A
Miscellaneous Data	: N/A
Solubility	: N/A



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Section 10 – Stability and reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Moisture.

Materials to Avoid: Alcohols, Oxidizing agents, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 – Toxicological Information

IRRITATION DATA

Eyes

Rabbit

0.1 ml

24H

Remarks: Severe irritation effect

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

ROUTE OF EXPOSURE

Skin Contact

Causes burns.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

Causes burns. Lachrymator.

Inhalation

Material is extremely destructive to the tissue of the Mucous membranes and upper respiratory tract. May be harmful if inhaled

Ingestion

May be harmful if swallowed.



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Section 12 - Ecological Information

ECOTOXICOLOGICAL EFFECTS

Test Type : LC50 Fish
Species : Brachydanio rerio
Time : 96 h
Value : 214.0 - 464.0 mg/l

Section 13 – Disposal Considerations

SUBSTANCE DISPOSAL

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 – Transport Information

RID/ADR

UN No. : 2395
Class : 3
PG : II
Subrisk : 8
Proper Shipping Name : Isobutyryl chloride

IMDG

UN No. : 2395
Class : 3
PG : II
Subrisk : 8

Proper Shipping Name : Isobutyryl chloride
Marine Pollutant : No
Severe Marine Pollutant : No

IATA

UN No. : 2395
Class : 3
PG : II
Subrisk : 8
Proper Shipping Name : Isobutyryl chloride
Inhalation Packing Group I : No

Section 15 – Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: F-C
Highly Flammable. Corrosive.



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R-PHRASES: 11-35
Highly flammable. Causes severe burns.

S-PHRASES: 16-23-26-36-45
Keep away from sources of ignition - no smoking. Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

COUNTRY SPECIFIC INFORMATION

Germany
WGK: 1
Self-Classification

Section 16 - Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Shiva Pharmachem Pvt. Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incident, consequential or exemplary damages, howsoever arising, even if Shiva Pharmachem Pvt. Ltd has been advised of the possibility of such damages