

Material Safety Data Sheet

n-BUTYRYL CHLORIDE

Section 1 – Product and Company Information

Substance	: Butyryl Chloride, Butanoyl chloride, Butanoic acid chloride
Trade Name	: Butyryl Chloride
Chemical Family	: Carboxylic Acid Chloride
Company	: Shiva Pharmachem Ltd. Plot No. 588, Village Luna – 391140 Taluka: Padra District: Vadodara, Gujarat India
Phone No.	: + 91 2262 221021 / 224360
Fax No.	: + 91 2662 223314

Section 2 – Hazards Identification

2.1 Classification of the substances or mixture

Classification according to regulations (EC) no 1272 / 2008 (EU GHS/CLP)

Flammable liquid (Category 2), Acute toxicity inhalation (category 3) Skin Corrosion, (Category 1B)

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

Causes burn, Highly Flammable

2.2 Labeling elements

Labeling according to EC 1272 / 2008 (CLP)

Pictogram



Single word

Danger

Hazard Elements

H225	Highly flammable liquid and vapour.
H314	Causes severe skin burn and eye damage.
H331	Toxic if inhaled.

Precautionary statements

P210	Keep away from heat/spark/open flame/hot surface - No smoking
P261	Avoid breathing vapors.
P280	Wear protective gloves/protective clothing/eye and face protection

P305 + P351 + P338	IF IN EYES: Rinse cautiously for several minutes.
P310	Immediately call physician

According to EU directives 67/548/EEC as amended

Hazard symbol(s)



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R PHRASE (s)

R11 Highly flammable
R34 Packing Group

S PHRASE (s)

S16 Keep away from source of ignition – No smoking
S23 Do not breathe gas/vapour/fumes/spray.
S26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
S36 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or you feel unwell, seek medical advice. (Show the label where possible)

2.3 Other hazard

Lachrymator.

Section 3 – Composition / Information on Ingredients

Product Name	CAS No.	EC No.	Mol. Formula	Mol Weight
Butyryl Chloride	141-75-3	205-498-5	C ₄ H ₇ ClO	106.55 g/mol

Section 4 – First Aid Measures

4.1 Description of first aid measure

General advice

Consult to physician. Show this safety data to the doctor.

Inhalation

If inhaled, move person into fresh air, If Not breathing give artificial respiration. Consult physician.

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.

4.2 Most important symptoms and effect, both acute and delayed.

Material is extremely destructive to tissues of mucous membrane and upper respiratory tract, eyes and skin. Cough, shortness of breath, headache, nausea.

Section 5 – Fire Fighting Measures

CONDITIONS OF FLAMMABILITY

Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.

EXTINGUISHING MEDIA

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Suitable: Carbon dioxide.

Unsuitable: Do not use water.

SPECIAL RISKS

Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions.

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

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

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 down all sources of ignition.

PROCEDURE(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. Store in a cool dark & dry place. Incompatible Materials: Do not allow contact with water

Section 8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

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

PERSONAL PROTECTIVE EQUIPMENT

Special Protective Measures: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

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Section 9 - Physical and Chemical Properties

Appearance Color	: Colorless
Form	: Clear liquid
pH	: Acidic
BP/BP Range	: 98.0 - 102.0 °C
MP/MP Range	: -89.0 °C
Flash Point	: 21.7 °C
Flammability	: Flammable
Autoignition Temp	: 280 °C
Oxidizing Properties	: Data not available
Explosive Properties	: Data not available
Explosion Limits Lower	: 2.5 %
Explosion Limits Upper	: 7.3 %
Vapor Pressure	: 39 mmHg 20 °C
SG/Density	: 1.018 g/cm ³ at 25°C
Vapor Density	: 3.7 g/l
Solvent Content	: Nil
Water Content	: Reacts with water hence not applicable
Surface Tension	: Data not available
Conductivity	: Data not available
Solubility Other Solvents	: miscible with Ether, toluene, methylene chloride.

Section 10 - Stability and Reactivity

STABILITY

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

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, hydrogen chloride.

Section 11 - Toxicological Information

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

ROUTE OF EXPOSURE

Multiple Routes: Harmful if swallowed, inhaled, or absorbed through skin.
Causes burns.

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Section 12 - Ecological Information

ECOTOXICOLOGICAL EFFECTS

Test Type : LC50 Fish
Species : Brachydanio rerio
Time : 96 h
Value : 215.0 - 464.0 mg/l

Section 13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose off this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

RID/ADR

UN No . : 2353
Hazard Class : 3
Packing Group : II
Subrisk : 8
Proper Shipping Name : Butyryl chloride

IMDG

UN No . : 2353
Hazard Class : 3
Packing Group : II
Subrisk : 8
Proper Shipping Name : Butyryl chloride
Marine Pollutant : No
Severe Marine Pollutant : No

IATA

UN No . : 2353
Hazard Class : 3
Packing Group : II
Subrisk : 8
Proper Shipping Name : Butyryl 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: 11-34
Highly flammable. Causes 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.

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 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 Ltd has been advised of the possibility of such damages.