

# Safety Data Sheet

## 1. IDENTIFICATION

|                         |                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------|
| <b>Product Name:</b>    | Isobutyl Isobutyrate                                                                                 |
| <b>Other Names:</b>     | IBIB                                                                                                 |
| <b>Recommended Use:</b> | Chemical solvent                                                                                     |
| <b>Supplier:</b>        | Global Chemie ASCC Limited                                                                           |
| <b>Street Address:</b>  | 88/123 Moo 2 Bangpoo Industrial Estate (North), Phraek Sa Mai, Mueang Samutprakan, Samutprakan 10280 |
| <b>Telephone:</b>       | +66 2324 6888                                                                                        |
| <b>Fax:</b>             | +66 2324 6898-99                                                                                     |
| <b>Emergency phone:</b> | +66 2324 6888 ext.320                                                                                |

## 2. HAZARDS IDENTIFICATION

### Hazardous Nature

This product is classified as hazardous under GHS criteria

### Hazardous Classification

Flammable liquids: Category 3

Specific target organ system toxicity (single exposure): Category 3 (central nervous system)

Acute aquatic toxicity: Category 3

Chronic aquatic toxicity: Category 3

### Hazardous Statement

Flammable liquids and vapours.

### GHS Pictograms



### Hazard Statements

H226: Flammable liquids and vapors.

H336: may cause drowsiness or vertigo.

H412: Harmful to aquatic life and has long-term.

### Precautionary Statements

P210: Keep away from heat/sparks/open flames. Smoking is prohibited.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Uses explosion-proof electrical/ventilation/lighting equipment.

P242: Use only tools that do not produce sparks.

P243: Take measures to prevent electrostatic discharge.

P261: Avoid inhalation of dust/smoke/gas/fumes/vapors/sprays.

P271: Use only be used outdoors or in well-ventilated areas.

P273: Avoid release into the environment.

P280: Wear protective gloves/eye protection/mask.

P370 + P378: In the event of a fire: extinguish with dry sand, dry powder, or anti-soluble foam.

**Response Statements****If on skin**

P303 + P361 + P353: In case of skin (or hair) contact: Remove/remove all contaminated clothing immediately. Wash skin/shower with water.

**If inhaled**

P304 + P340 + P312: If inhaled: Move the victim to fresh air and rest in a comfortable breathing position. If you feel unwell, call a detoxification centre or seek medical attention

**If in eye**

No data available.

**Storage Statements**

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P403 + P235: Store in a well-ventilated place. Keep it cold.

P405: Storage must be locked

**Disposal Statements**

P501: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied.

**Signal Word:** Warning

**3. COMPOSITION: Information on Ingredients**

| Chemical Ingredient  | CAS No. | UN No. | Proportion (%v/v) |
|----------------------|---------|--------|-------------------|
| Isobutyl Isobutyrate | 97-85-8 | 2528   | > 99.0            |

Molecular Formula:  $C_8H_{16}O_2$

Molecular Weight: 144.21 g/mol

**4. FIRST AID MEASURES**

For advice, contact Ramathibodi Poison Center (Phone: 1367) or a doctor.

**Ingestion**

Drink plenty of warm water, induce vomiting, and seek medical attention promptly.

**Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes. If contact lenses are worn and can be easily removed, remove the contact lenses and continue to develop. If eye irritation persists, seek medical advice/seek medical attention.

**Skin Contact**

Remove all contaminated clothing immediately and wash with soap and water. If symptoms persist, seek medical attention

**Inhalation**

Transfer to fresh air. If you feel unwell, seek medical advice/medical attention.

**First Aid facilities**

Provide eye baths and safety showers.

**Medical Attention**

Treat according to symptoms. Avoid gastric lavage: risk of aspiration of product to the lungs with the potential to cause chemical pneumonitis.

**5. FIRE FIGHTING MEASURES****Extinguishant**

Suitable extinguishing agent Water spraying, dry chemical powder, carbon dioxide (CO<sub>2</sub>), foam Unsuitable fire extinguishing agent Not reported.

**Hazardous combustion products**

It is known to be a harmful combustion product.

**Particularly dangerous**

Not reported.

**Special fire extinguishing methods**

Flammable liquids and vapours.

The material floats on the surface of the water and can be ignited.

**Protective equipment for firefighters:** uses positive pressure breathing apparatus (SCBA) and protective firefighting clothing (including fire helmets, jackets, pants, boots and gloves). If protective equipment is not available or not in use, extinguish the fire from a protected location or from a safe distance.

**6. ACCIDENTAL RELEASE MEASURES****Emergency Procedures**

Prevent fluid from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours from building up in confined areas. Ensure that drain valves are always closed. Clean up and report spills immediately.

**Methods and materials for containment****Protective Measures**

- Observe all relevant local and international regulations.
- Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see chapter 8 this Material Safety Data Sheet. Shut off leaks, if possible, without personal risks. Remove all possible sources of ignition in the surrounding area. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
- Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

**Clean-Up Methods**

- ♦ Small spillage (< 200 LT) : Transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
- ♦ large spillage (> 200 LT) : Transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

**7. HANDLING AND STORAGE****Operational disposition**

Operate in accordance with good industrial hygiene and safety practices. Do not operate until you have read and understood all safety precautions. Use only under conditions of adequate ventilation. Avoid prolonged or repeated contact with skin. Contaminated clothing should be washed before reuse. Keep away from heat, sparks, flames and other sources of ignition. Take precautions against electrostatic discharge.

Do not eat, drink or smoke while using this product. Wash thoroughly after operation. Minimize exposure to air. Periodically detect the formation of peroxides during storage.

Storage Condition

Keep away from tinder, heat sources. The library temperature should not exceed 30 °C. Keep the container tightly sealed. Keep locked and stored out of the reach of children. Stay away from food, drink and animal feed. Storage is carried out in accordance with local regulations.

Protection against contact with prohibited compounds: strong oxides

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

Hazard Exposure

| ingredients          | CAS No. | The type of value (contact form). | Control parameters / allowable concentration |
|----------------------|---------|-----------------------------------|----------------------------------------------|
| Isobutyl Isobutyrate | 97-85-8 | TWA                               | 100 PPM                                      |

Engineering Controls:

Good ventilation should be used (usually 10 air changes per hour). If applicable, use the enclosure, local exhaust ventilation or other engineering controls to keep airborne exposure limits below recommended levels. If exposure limits have not been established, levels in the air are maintained to acceptable levels.

Personal Protective Equipment

Respiratory protection: If ventilation is poor, wear appropriate respiratory protection.

Eye and surface protection: Wear safety glasses (or goggles) with protective edges.

Skin and body protection: suitable protective clothing. Skin contact should be minimized.

Hand protection: Wear protective gloves.

Other: Use good personal hygiene. Do not consume or store food in the work area. Wash your hands before smoking or eating. Precautions: Make sure eyewashes and safety showers are located near the workplace. Use personal protective equipment as required.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Property                        | Unit of Measurement | Typical Value     |
|---------------------------------|---------------------|-------------------|
| Appearance                      | -                   | Colorless liquid  |
| Odour                           | -                   | Sweet             |
| pH                              | -                   | No data available |
| Boiling point                   | °C                  | 148               |
| Melting point                   | °C                  | - 81°C            |
| Flash point                     | °C                  | 40                |
| Flammability                    | -                   | Flammable         |
| Autoignition Temperature        | °C                  | No data available |
| Decomposition Temperature       | °C                  | No data available |
| Lower/Upper Flammability Limits | %V                  | 1.5-12.5          |
| Density @ 25°C                  | g/cm³               | No data available |
| Specific Gravity @ 25°C         | -                   | No data available |
| Viscosity @ 25°C                | cSt                 | No data available |
| Vapor pressure                  | kPa                 | 400 Pa @ 26°C     |
| Vapor density                   | kPa (Air = 1)       | No data available |

| Property                                              | Unit of Measurement   | Typical Value     |
|-------------------------------------------------------|-----------------------|-------------------|
| Evaporation Rate                                      | (n-Butyl acetate = 1) | No data available |
| Water Solubility                                      | -                     | <0.1              |
| Solubility in other solvents<br>Partition coefficient | (n-octanol/water)     | No data available |
| Coefficient of Thermal Expansion                      | per Deg °C            | No data available |
| Particle Characteristic                               | -                     | No data available |

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

## 10. STABILITY AND REACTIVITY

### Chemical Stability

Stable under normal conditions.

### Conditions to avoid

Heat, flame, spark and other ignition sources.

### Hazardous decomposition products

Not present under normal use conditions.

### Hazardous reactions

Does not occur during normal handling.

### Hazardous Polymerisation

No data available.

### Materials to Avoid

Strong oxidizing agents.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxic

**Acute oral toxicity:** Half lethal dose (LD50), oral (rats) : 6,400 to 12,800 mg/kg

Half lethal dose (LD50), oral (mouse) : 6,400 - 12,800 mg/kg

**Acute inhalation toxicity: LC50 (rat):** 48.18 mg/l exposure time: 4 h

**Acute percutaneous toxicity:** Half lethal dose (LD50), skin (rabbit) : > 8,600 mg/kg

**Skin corrosion/irritating ingredient:** Guinea pigs exposed to time: 24 h Result: Slightly

**Inhalation:** may cause drowsiness or dizziness.

**Skin contact:** Repeated exposure may cause dry and cracked skin.

**Eye contact:** No data available.

**Ingestion:** No data available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

**Toxicity to fish: LC50** (Pimephales promelas): 12.54 mg/l Exposure time: 96 h

**Toxicity to watery and other aquatic invertebrates: EC50** (Daphnia magna): 55.8 mg/l

Exposure time: 48 h

**Persistence and degradability:** Composition: Isobutyl isobutyrate biodegradability: not easy to biodegrade quickly.

Biodegradability: 42% Exposure time: 28 days

**Bioaccumulation potential:** Composition: isobutyl isobutyrate Octanol/water partition coefficient Pow: 478.6log Pow: 2.68

**Migration in soil:** No information available.

**Other environmental harmful effects:** No information available.

13. DISPOSAL CONSIDERATIONS

**Nature of waste:** hazardous waste

**Waste disposal methods:** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Disposal methods for waste packaging:** Empty containers should be recycled, restored, or disposed of locally by waste. Disposal shall be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

| Road and Rail Transport |                      | Marine Transport     |                      | Air Transport        |                      |
|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| UN. Number              | 2528                 | UN. Number           | 2528                 | UN. Number           | 2528                 |
| Class/Item              | 3                    | Class/Item           | 3                    | Class/Item           | 3                    |
| Hazard Symbol           | Flammable Liquid     | Hazard Symbol        | Flammable Liquid     | Hazard Symbol        | Flammable Liquid     |
| Proper Shipping Name    | Isobutyl isobutyrate | Proper Shipping Name | Isobutyl isobutyrate | Proper Shipping Name | Isobutyl isobutyrate |
| Packing Group           | III                  | Packing Group        | III                  | Packing Group        | III                  |
|                         |                      | Marine Pollutant     | Not Regulated        |                      |                      |

15. REGULATORY INFORMATION

Product ingredients are listed in the following directory:

DSL: All ingredients in this product are on the Canadian DSL list.

AICS: Exists in or complies with an existing list.

ENCS: Exists in or complies with existing lists.

ISTL: Exists in or fits into an existing list.

KECI: Exists in or complies with existing lists.

PICCS: Exists in or complies with an existing list.

IECSCs: Exists in or complies with an existing directory.

TCSI: Exists in or complies with existing lists.

TSCA: Exists in or complies with an existing list.

AICS - Australian Catalogue of Chemical Substances.

ANTT - Brazilian National Land Transport Agency.

ASTM-American Society for Testing and Materials.

CMR - carcinogenic, mutagenic, or reproductive toxicity.

CPR - Regulated Products Regulation.

DIN - German Institute for Standardization.

DSL - Canadian Domestic List of Chemical Substances.

ENCS - List of Existing and New Chemical Substances in Japan.

GHS - Globally Harmonized System of Classification and Labelling of Chemicals.

GLP - Qualified Laboratory Specification.

IARC - International Agency for Research on Cancer.

IATA - International Air Transport Association.

IBC - International Code for the Construction and Equipment of Ships Transporting Hazardous Chemicals in Bulk. IC50-semi-inhibitory concentration. ICAO - International Civil Aviation Organization.

IECSC - List of Existing Chemical Substances in China.

IMDG - International Maritime Dangerous Goods.

IMO - International Maritime Organization.

ISHL - Japan Industrial Safety and Health Act.

ISO-International Organization for Standardization.

KECI - List of Existing Chemical Substances in Korea.

**Regulatory Information:**

Regulations on the Safety Management of Hazardous Chemicals (implemented on January 26, 2002, amended for the second time by State Council Order No. 645 of December 7, 2013)

Regulations on the Safe Use of Chemicals in the Workplace (Ministry of Labour Fa [1996] No. 423)

Classification and labelling of commonly used hazardous chemicals (effective from May 1, 2010)

Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste (effective as of May 1, 2010)

Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste (Revised on April 29, 2020) General Technical Conditions for Transport Packaging of Dangerous Goods (GB 12463-2009)

Regulations on the Preparation of Chemical Safety Labels (GB 15258-2009)

Chemical Safety Data Sheet - Content and Item Sequence (GB/T16483-2008)

MSDS Writing Guide (GBT17519-2013)

General Principles of Chemical Classification and Hazard Disclosure (GB13690- 2009).

Precautions for GHS Safety Labels of Chemicals (GB15258-2009)

**16. OTHER INFORMATION**

National Fire Protection Association (USA) : No data available

SDS Distribution : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty of guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Prepared By : Quality Control Department / Global Chemie ASCC Limited

**Abbreviations:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

**References:**

- Supplier Material Safety Data Sheets

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities

surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. No warranty and guarantee are expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product for further information, please contact Global Chemie ASCC Limited.