Chemical Safety Data Sheet

Product name: RTC-IBIB® is prepared in accordance with GB/T16483-2008, GB/T17519-2013

Last revision date: January 1, 2022 Version: 1.2

Part I Chemicals and Corporate Identification

Chemical name: RTC-IBIB®

Chinese Name: Isobutyl isobutyrate

Enterprise name: **Ruentai Chemical (Taixing) Co., Ltd**

Address: No. 17, Wenhua West Road, Taixing Economic Development Zone, Jiangsu Province

Zip Code: 225400

Phone: 400-626-0050

Fax: 0523-80575519

Address: www.runtaichem.com

Recommended and restricted uses of the chemical

Recommended use: solvent

Deprecated use: No information available

Part II Overview of Hazards

Overview of emergencies

Appearance and properties: liquid

Color: Colorless

Smell: Sweet

Flammable liquids and vapours. May cause drowsiness or dizziness. Harmful to aquatic life and has long-term lasting effects.

GHS hazard class

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

Label element

Symbols/pictograms 

Signal word warning

Hazard statement H226 Flammable liquids and vapors

H336 may cause drowsiness or vertigo

H412 is harmful to aquatic life and has long-term lasting effects

Precautionary notes

Precautions: P210 Keep away from heat/sparks/open flames. Smoking is prohibited. P233 Keep container tightly closed. P240 container and loading equipment ground/equipotential connection. 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 should only be used outdoors or in well-ventilated areas. P273 Avoid release into the environment. P280 Wear protective gloves/eye protection/mask.

Incident Response: P303 + P361 + P353 In case of skin (or hair) contact: Remove/remove all contaminated clothing

immediately. Wash skin/shower with water. 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 center or seek medical attention. P370 + P378 In the event of a fire: extinguish with dry sand, dry powder or anti-soluble foam.

Storage: 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:

P501 Send contents/containers to an approved waste treatment plant for disposal.

Physical and chemical hazards Flammable liquids and vapours.

Health hazards May cause drowsiness or dizziness.

Environmental hazards Harmful to aquatic organisms. It is harmful to aquatic organisms and has a long-term continuous sound.

Other hazards No information available.

第3部分 Composition and composition information

Substance/Mixture: Substance

Chemical composition	CAS NO.	molecular weight	Content(w/w)
Isobutyl isobutyrate	97-85-8	144.2	99.0~99.9%

Part IV First aid measures

Skin contact: Remove all contaminated clothing immediately and wash with soap

and water. If symptoms persist, seek medical attention.

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.

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

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

The most important symptom and health effect (both acute and late): anesthetic effects.

Advice for protecting rescuers: Use personal protective equipment as required.

Special tips for doctors: symptomatic treatment.

Part V Fire Protection Measures

extinguishant

Suitable extinguishing agent Water spraying, dry chemical powder, carbon dioxide (CO2), 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: use 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.

Part VI Emergency Handling of Leakage

Personnel protection measures, protective equipment and emergency handling procedures

Evacuate people to safety. Ensure adequate ventilation, especially in confined areas. Remove all ignition sources. Use personal protective equipment recommended in Section 8. Avoid contact with skin, eyes or clothing. Avoid inhalation of dust/fumes/gases/fumes/vapes/vapors/sprays.

Environmental protection measures

Avoid releasing into the environment.

Containment and removal methods of spilled chemicals and disposal materials used

Contain and collect spills, then absorb them with non-combustible absorbent materials (e.g., sand, mud, diatomaceous earth, vermiculite) and place them in containers for disposal in accordance with local/national regulations (see Section 13).

Preventive measures to prevent secondary hazards

Prevent further leaks or spills where it is safe to do so.

Part VII Handling, Disposal 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.

stockpile

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

Part VIII Contact Control/Personal Protection

Contact limits

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

Engineering control

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.

Hand protection: Wear protective gloves. Skin contact should be minimized.

Intake: 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.

Part IX Physical and Chemical Properties

Appearance and properties: colorless transparent liquid

Smell: Sweet

Melting point: -81°C

Boiling point: 148°C (normal pressure).

Flash point: 40°C (Tag closed cup flash point test method).

Evaporation rate: 0.4

Solubility: Not determined

Explosion limit: 1.5-12.5%

Odor threshold: Not determined

Vapor pressure: 400Pa (20°C)

Relative density: 0852（25℃）

Water solubility: <0.1g/L (25°C).

Distribution coefficient (LogPow): 268 (25℃)

Decomposition temperature: 324.2℃(Method DSC)

Kinematic viscosity: 1.030 mm2/s (25℃)

Dynamic viscosity: 0.85 mPa.s (25℃)

Part X Chemical stability and reactivity

Stability: Stable under normal conditions.

Possibility of hazardous reactions: does not occur during normal handling.

Conditions to avoid: heat sources, flames, and sparks.

Forbidden compounds: strong oxidants

Dangerous decomposition products: not present under normal use conditions

Part XI Toxicological Information

Acute toxic

component**:** isobutyl isobutyrate

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**:** isobutyl isobutyrate

Species: Guinea pigs exposed to time

: 24 h Result

: Slightly

Information products on possible routes of exposure

: isobutyl isobutyrate

Inhalation: may cause drowsiness or dizziness.

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

Eye contact: not reported.

Ingestion: Not reported.

Part XII Ecological data

Ecotoxicity:

Composition**:** Isobutyl isobutyrate

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.

Part XIII Disposal of Waste

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.

Part XIV Shipping Information

Air Freight (IATA-DGR)

UN/ID number: UN 2528

UN shipping name: Isobutyl isobutyrate

Category: 3

Packing Category: III

Label: Flammable Liquids

Packing instructions (cargo aircraft): 366

Packing instructions (passenger aircraft): 355

Maritime transport (IMDG-Code)

UN number: UN 2528

UNITED NATIONS SHIPPING NAME: ISOBUTYL ISOBUTYRATE

Category: 3

Packing Category: III

Label: 3

EmS table numbers: F-E, S-D

Marine pollutants (Yes/No): No

In accordance with Annex II and IBC Rules of the MARPOL 73/78 Convention

Product name：BUTYL BUTYRATE (all isomers)

Pollution category：Y

Ship type：3

Packaging mark: flammable liquid, transported and stored according to Class 3 hazardous chemicals

Packing: 170kg/drum

Precautions for transportation: Before transportation, check whether the packaging container is complete and sealed, and ensure that the container does not leak, collapse, fall or damage during transportation. It is strictly forbidden to mix and transport with oxidants, acids, alkalis, etc. When shipping, it should be isolated from the engine room, power supply, fire source and other parts.

Part XV 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 labeling 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)

Section XVI Additional Information

Additional information:

The information provided in this information is not an indicator of the product and does not guarantee a particular nature. The information contained is general safety guidance on health and safety based on our knowledge of the handling, storage and use of the product. It is not intended for use of this product in special or non-standard and if it is not used as directed and recommended.

The technical data referenced in this material is currently reliable. When additional knowledge and experience is gained, it should be revised.