

SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Dec 17, 2021

Revision Date: Dec 17, 2021

SECTION 1. Identification of the substance

Product identifiers

Product name: Isovaleric acid

CAS-No.: 503-74-2

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

Details of the supplier of the safety data sheet

Company: CHEMLYTE SOLUTIONS CO., LTD

Address: A1-3-830, XiXi Center, No. 588, Wenyi West Road, Hangzhou 310000,
Zhejiang, China

Telephone: +86-(571)-85061365

Fax : +86-(571)-85060165

Emergency telephone number

Emergency Phone # : +1-703-527-3887

SECTION 2: Hazards identification

Summary of emergency

liquid colorless unpleasant Combustible liquid., May be harmful if swallowed., Causes severe skin burns and eye damage., Harmful to aquatic life. First aiders need to protect themselves., Show this material safety data sheet to the doctor in attendance. After inhalation: fresh air. Call in physician. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower., Call a physician immediately. After eye contact: rinse out with plenty of water., Immediately call in ophthalmologist., Remove contact lenses. After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation)., Call a physician immediately., Do not attempt to neutralise. Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire. Violent reactions possible with: alkalines, Amines, Nitriles, Oxidizing agents

2.1 GHS Classification

Flammable liquids (Category 4), H227

Acute toxicity, Oral (Category 5), H303

Skin corrosion/irritation (Category 1B), H314

Serious eye damage/eye irritation (Category 1), H318

Short-term (acute) aquatic hazard (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram:



Signal Word: Danger

Hazard Statements

H227 Combustible liquid.

H303 May be harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H402 Harmful to aquatic life.

Precautionary Statements

Prevention

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P312 Call a POISON CENTER/ doctor if you feel unwell.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

Reduced Labeling (<= 125 ml)

Pictogram:



Signal Word: Danger

Hazard Statements

H227 Combustible liquid.

H303 May be harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H402 Harmful to aquatic life.

Precautionary Statements none

2.3 Physical and chemical hazards

H227 Combustible liquid.

2.4 Health hazards

H303 May be harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

2.5 Environmental hazards

H402 Harmful to aquatic life.

2.6 Other hazards - none

SECTION 3: Composition/information on ingredients

Substance / Mixture : Substance

3.1 Substances

Synonyms : 3-Methylbutanoic acid

3-Methylbutyric acid

Formula : C₅H₁₀O₂

Molecular weight : 102.13 g/mol

CAS-No. : 503-74-2

EC-No. : 207-975-3

Hazardous ingredients

Component	Classification	Concentration
3-methylbutyric acid		
	Flammable liquids Category 4; Acute toxicity Category 5; Skin corrosion/irritation Category 1B; Serious eye damage/eye irritation Category 1; Short-term (acute) aquatic hazard Category 3; H227, H303, H314, H318, H402	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

4.4 Notes to physician

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂) Foam Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H⁺, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class

Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (Aldrich Z677647)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Solvent penetration time: 30 min

Material tested: Dermatril® P (Aldrich Z677388, Size M)

Test method EN374

Body Protection

protective clothing

Respiratory protection

If the hazard assessment shows that the gas mask with air purification is required, please use the full mask multi-functional gas mask (US) or abek type (en14387) gas mask cartridge as a candidate for engineering control. If a gas mask is the only way to protect, use a full mask air supply gas mask. Respirators use respirators and parts that have been tested and passed government standards such as NIOSH (US) or cen (EU).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: liquid

Color: colorless to light yellow

Odor: No data available

Melting point: -29°C

Initial boiling point and boiling range: 175-177°C

Flammability (solid, gas): No data available

Flash point: 74°C

pH: No data available

Viscosity Viscosity, kinematic: No data available

Relative vapor density: No data available

Particle characteristics: No data available

Explosive properties: No data available

SECTION 10: Stability and reactivity

10.1 Chemical stability

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

High temperature, flames and sparks.

10.5 Incompatible materials

Alkalis, oxidizers and reductant.

10.6 Hazardous decomposition products

No data available

SECTION 11: Toxicological information

Information on the likely routes of exposure: Ingestion (swallowing), skin/eye exposure and inhalation.

Symptoms related to the physical, chemical and toxicological characteristics:

Acute health effects: Ingestion can cause symptoms such as burning, nausea, vomiting and abdominal pain. Skin contact can cause redness, pain and burn. Inhalation can cause cough, throat pain and burn. Eyes contact can cause irritation, pain and burn.

Chronic health effects: The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterized by skin redness (erythema) and swelling the epidermis. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Numerical measures of toxicity (such as acute toxicity estimates): LD50(oral, rat): 2500 mg/kg.

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3265

IMDG: 3265

IATA-DGR: 3265

14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (3-methylbutyric acid)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (3-methylbutyric acid)

IATA-DGR: Corrosive liquid, acidic, organic, n.o.s. (3-methylbutyric acid)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA-DGR: 8

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA-DGR: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA-DGR: no

14.6 Special precautions for user

Based on chemical properties, choose appropriate tools and conditions of transport.

Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

14.7 Incompatible materials

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H227 Combustible liquid.

H303 May be harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H402 Harmful to aquatic life.

Further information

Further information

Copyright 2021 Chemlyte Solutions Co., Ltd granted to make unlimited paper copies for internal use only.