
 <p>CHEMLABS Quality Our Forte</p>	<p>LEONID CHEMICALS PVT. LTD., BANGALORE</p> <p>An ISO-9001:2008 Certified Company</p> <p>Quality Assurance Department</p>	<p>(CODE) DOCUMENT : WI (CODE) SECTION : WI/SM (DATE) : 01.04.2010</p>	 <p>Issue : 02 Rev.: 00</p>
<p>Title: MATERIAL SAFETY DATA SHEET (MSDS):ISOBUTYRIC ACID</p>			<p>1 Page of 1</p>

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Isobutyric Acid

Catalog Numbers:I114

Synonyms: 2-Methylpropionic acid

CAS-No. :79-31-2

Company Information:

LEONID CHEMICALS Pvt Ltd,
62/A2,1st Stage,
Yeshwanthpur Industrial Suburb,
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SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, Dermal (Category 4)
Acute toxicity, Oral (Category 4)
Classification according to EU Directives 67/548/EEC or 1999/45/EC
Harmful in contact with skin and if swallowed.

Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word Warning

Hazard statement(s)

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing.



Supplemental Hazard

Statements

None

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

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R-phrases(s)
R21/22 Harmful in contact with skin and if swallowed.
S-phrases(s) none

Other hazards
Stench.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
Synonyms : 2-Methylpropionic acid
Formula : C₄H₈O₂
Molecular Weight : 88,11 g/mol

Component		Concentration
Isobutyric acid		
CAS-No.	79-31-2	-
EC-No.	201-195-7	
Index-No.	607-063-00-9	

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.



In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Indication of any immediate medical attention and special treatment needed

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no data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove

all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations

Reference to other sections



For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Stench.

Specific end uses

no data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

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

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.



Immersion protection

Material : Nature latex/chloroprene
 Minimum layer thickness : 0,6 mm
 Break through time : 480 min
 Material tested : Lapren

Splash protection

Material : Nitrile rubber
 Minimum layer thickness : 0,11 mm
 Break through time : 30 min
 Material tested : Dermatril

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must

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be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES



Information on basic physical and chemical properties

Appearance Form	: clear, liquid
Colour	: colourless
Odour	: Threshold no data available
pH	: 2,5 at 100 g/l at 20 °C
Melting point/range	: -47 °C - lit.
Initial boiling point	: 153 - 154 °C - lit.
Flash point	: 55 °C - closed cup
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: 10 %(V)
Lower explosion limit	: 2 %(V)
Vapour pressure	: 2,0 hPa at 20 °C
Vapour density	: 3,04 - (Air = 1.0)
Relative density	: 0,95 g/cm ³ at 25 °C
Partition coefficient	: noctanol/water
log Pow	: 0,604
Autoignition temperature	: no data available
Decomposition temperature	: no data available
Viscosity	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available

Other safety information

Surface tension 25,2 mN/m at 25 °C

SECTION 10. STABILITY AND REACTIVITY

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Reactivity

no data available

Chemical stability

no data available

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Other decomposition products - no data available

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 266 mg/kg

LD50 Dermal - rabbit - 475 mg/kg

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity



no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

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Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion Toxic if swallowed.

Skin Toxic if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: NQ4375000

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SECTION 12. ECOLOGICAL INFORMATION
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Toxicity

Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 286 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 1.000 mg/l - 24 h

Toxicity to algae EC50 - *Desmodesmus subspicatus* (green algae) - 45 mg/l - 72 h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available



Results of PBT and vPvB assessment

no data available

Other adverse effects

Harmful to aquatic life.
no data available

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SECTION 13. DISPOSAL CONSIDERATIONS
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13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

UN number

ADR/RID: 2529 IMDG: 2529 IATA: 2529

UN proper shipping name

ADR/RID: ISOBUTYRIC ACID
IMDG: ISOBUTYRIC ACID
IATA: Isobutyric acid

Transport hazard class(es)

ADR/RID: 3 (8) IMDG: 3 (8) IATA: 3 (8)

Packaging group

ADR/RID: III IMDG: III IATA: III

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

no data available



SECTION 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

Chemical Safety Assessment

no data available

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SECTION 16 - ADDITIONAL INFORMATION

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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 Leonid Chemicals Pvt. Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Leonid Chemicals Pvt. Ltd. has been advised of the possibility of such damages.



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		Title: SPECIFICATION MANUAL – ISOBUTYRIC ACID LR	

Specification manual – Isobutyric acid LR

C₄H₈O₂

Mol Wt: 88.11

Product : Isobutyric acid LR
Description : A clear colourless liquid
Cat No : I114
Cas No : 79-31-2
Prepared Date : 14.09.2012
Approved Date : 14.09.2012

REVISION HISTORY			
Issue/Rev	Description of Change	Author	Effective Date
01/00	Initial Release	S. Paul Joshua	14.09.2012
02/00	Reviewed no changes	S. Paul Joshua	NA
Next Review Due :	02.04.2015		
To be reviewed by :	Head-QC/QA		

Sl. No.	Tests	Specification
		LR
1	Assay	≥ 99.0 %
2	Boiling range	153 - 154°C
3	Density@25°C	0.95g/ml

Approved By: S.Paul Joshua, Head Quality Control and Quality Assurance