

MATERIAL SAFETY DATA SHEET


(Rev.1-Oct-2018)

Isobutyl Isovalerate

Section 1: IDENTIFICATION OF THE SUBSTANCE AND OF COMPANY

Product Name	Isobutyl Isovalerate
Chemical Name	2-methylpropyl 3-methylbutanoate
CAS No.	589-59-3
EINECS No.	209-653-8
Usage	In flavors and fragrances, an ingredient in the manufacturing of mixtures. Not intended for final consumer.
Manufacturer	Breeze Intermediates Pvt. Ltd. Z-39, Dahej SEZ, Dahej, Ta. Vagra, Dist. Bharuch (Guj.) India Tel.: +91 9825107638 Email: info@breezeipl.com , qc@breezeipl.com
Emergency telephone no.	+91 9825107638, +91 8155088809

Section 2: HAZARDS IDENTIFICATION

Classification as per EC No. 1272/2008	Flammable liquids (Category 3), H226 Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Specific target organ toxicity - single exposure (Category 3), H335
OSHA Hazard	Product not carcinogenic according to OSHA
Label elements including precautionary statement	Signal Word: Warning <i>Hazard statement(s):</i> H226 Flammable liquid and vapour. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. <i>Precautionary statement(s):</i> P261 Avoid breathing vapours. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Pictogram: 
Risk Phrases	May be irritating to the skin and eyes
HMIS Classification	Health hazard: 2 Flammability: 2 Physical hazards: 0
NFPA Rating	Health hazard: 2 Fire: 2 Reactivity Hazard: 0
Potential Health Effects	<u>Inhalation:</u> May be harmful if inhaled. Causes respiratory tract irritation. <u>Skin:</u> May be harmful if absorbed through skin. Causes skin irritation. <u>Eyes:</u> Causes eye irritation. <u>Ingestion:</u> Harmful if swallowed.
Other Hazards	The product does not contain substances included in the Substances of Very High Concern list (> 0.1 % w/w).

Section 3: INFORMATION ON INGREDIENTS

Concentration of the constituent	97-100% (% wt/wt)
Chemical name	2-methylpropyl 3-methylbutanoate
Chemical Entity	Straight chain primary aliphatic alcohols/aldehydes/acids/acetals and esters with esters containing saturated alcohols and acetals containing saturated aldehydes. No aromatic or hetero aromatic moiety as a component of an ester or acetal.
Molecular Formula	C ₉ H ₁₈ O ₂ (M.W. = 158.24 g/mol)
CAS No.	589-59-3
EC/EINECS No.	209-653-8
FEMA	3369

Section 4: FIRST AID MEASURES

Consumption (Ingestion)	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Do not induce vomiting.
Eye Exposure	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Inhalation	If inhaled, remove person to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
Skin Exposure	Wash immediately affected area with soap and plenty of water. Seek medical advice if irritation, pain, swelling, lacrimation or photophobia persists.
Most important symptoms and effects, both acute and delayed	Symptoms on inhalation: Choking, drowsiness, respiratory disruptions. Symptoms on eye contact: Irritation, reddening. Symptoms on skin contact: Irritation, stinging. Symptoms on ingestion: queasiness, stomach aches.
Immediate medical attention special treatment	Not applicable.
Others	Take Risk and Safety Phrases (section 15) into account

Section 5: FIRE-FIGHTING MEASURES

Extinguishing Media	Water spray, Alcohol-resistant foam, carbon dioxide, dry chemical powder or appropriate foam. For safety reasons do not use full water-jet.
Hazards arising from the substance	Not applicable.
Combustible Liquid	Keep away from source of heat, flame or spark. Cool endangered drums with water.
Advices for firefighters	In case of fire on the surrounding, follow the instructions: 1-Closed containers may build up pressure at elevated temperatures. 2-Avoid inhalation of generated fumes or vapors. Use appropriate respiratory equipment. 3-Do not allow the spillage of the fire extinguishing to sink into a drainage system or water area.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Handle the product using protective gloves resistant to the the chemicals exposed. Avoid contact with skin and inhalation of its vapours or smoke. Maintain adequate ventilation in the working area after spilling.
Environmental precautions	To avoid possible contamination of the environment. Do not discharge into any drains, surface waters or groundwaters
Methods and material for containment and cleaning up	Cover with an inert, inorganic, non-combustible absorbent material (e.g. dry-lime, sand, soda ash). Place in covered containers using non-sparking tools and transport outdoors. Avoid open flames or sources of ignition (e.g. pilot lights on gas hot water heater). Ventilate area and wash spill site after material pickup is complete. Dispose of in accordance with current laws and regulations.
Reference to other sections	Refer to section 13 Disposal considerations

Section 7: HANDLING AND STORAGE

Precautions for safe handling	Keep away from food, drink and animal feedingstuffs. When using do not smoke. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice.
Condition for Storage	Should be stored in tightly sealed and preferably full containers in a cool, well-ventilated, dry place, out of direct rays of the sun, Away from areas of high fire hazard, & should be periodically inspected. Incompatible materials should be isolated from each other.
Specific end use(s)	Not available

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters	Declaration of substances is not required.
Exposure controls	<u>Personal protection equipment:</u> Use personal protection equipment according to Directive 89/686/EEC. <u>Eye/Face protection:</u> Chemical safety goggles are recommended. Wash contaminated goggles before reuse. <u>Respiratory Protection:</u> Use personal breathing apparatus whenever deemed necessary. <u>Skin Protection:</u> Avoid contact with skin. Compatible chemical-resistant gloves are recommended. Wash contaminated gloves before reuse. <u>Engineering Controls-Ventilation:</u> The areas where the product is handled and stored should be adequately ventilated.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid.
Odor	Fruity ethereal apple like odor
pH value	No data available
Boiling point	168.5 °C @ 760 mm Hg.
Melting point	No data available
Flash point (closed cup)	38.89 °C.
Ignition Temperature	No data available
Auto Inflammability	Not Determined

Explosive Property	Not Determined
Oxidizing Property	Not Determined
Vapour Pressure	1.840000 mm/Hg @ 25 °C
Vapour Density	5.4 (Air=1)
Solubility in Water	136.1 mg/L @ 25 °C (est.)
Solubility in Alcohol	Soluble
Specific Gravity	0.850 – 0.860 @ 25 °C.
Partition Coefficient	3.021 (Octanol/Water)

Section 10: STABILITY AND REACTIVITY

Chemical stability	Stable under normal operational condition.
Reactivity	Heat, excessive heat, open flames and other sources of ignition. Strong oxidizing agents, strong reducing agents.
Incompatibility	Does not react with water. Avoid contact with strong oxidizing mineral acids, strong reducing agents.
Hazardous decomposition Products	Hazardous combustion or decomposition products: carbon oxides and other unidentified organic compound.

Section 11: TOXOLOGICAL INFORMATION

Acute toxicity	LD50 Oral - rat - >5,050 mg/kg, LD50 Oral - rabbit – 7,755 mg/kg LD50 Dermal - rabbit - >5,000 mg/kg
Inhalation Toxicity (LD ₅₀)	NA
Skin corrosion/irritation	Irritating to skin (24 hrs – Rabbit)
Human Experience	1% solution: No irritation or sensitization
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	May cause sensitization by inhalation.
Germ cell mutagenicity	No data available
Carcinogenicity	<u>IARC</u> : No component of this product present at levels $\geq 0.1\%$ is identified as probable, possible or confirmed human carcinogen by IARC. <u>OSHA</u> : No component of this product present at levels $\geq 0.1\%$ is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Specific target organ toxicity single exposure (GHS)	No data available
Specific target organ toxicity repeated exposure (GHS)	No data available
Aspiration hazard	No data available
Potential health effects	<u>Inhalation</u> : May be harmful if inhaled. Causes respiratory tract irritation. <u>Ingestion</u> : Harmful if swallowed. <u>Skin</u> : May be harmful if absorbed through skin. Causes skin irritation. <u>Eyes</u> : Causes eye irritation.
Signs and Symptoms of Exposure	No data available
Additional Information	RTECS: NY1506000

Section 12: ECOLOGICAL INFORMATION

General	Prevent contamination of soil, ground and surface waters. Do not discharge product unmonitored into the environment.
Acute aquatic Toxicity	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
PBT and vPvB assessment	Not determined. Not listed on EC's PBT substances list.
Other adverse effects	Do not allow the material to enter streams, sewers or other waterways

Section 13: DISPOSAL CONSIDERATION

Product Disposal	Dispose of according all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Packaging	Don not re-use empty containers. Empty residue into a suitable disposal site. Contaminated packaging should be disposed of as unused product.

Section 14: TRANSPORT INFORMATION

<i>International Carriage of Dangerous Goods by Road (ADR)</i>	
UN No.	1993
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S. (Isobutyl isovalerate)
Packing Group	III
Class	3
Tunnel restriction code	---
Label	---
<i>Air Transport (ICAO/IATA)</i>	
UN No.	1993
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S. (Isobutyl isovalerate)
Class	3
Packing Group	III
<i>Sea Transport (IMDG)</i>	
UN No.	1993
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S. (Isobutyl isovalerate)
Class	3
Packing Group	III
EmS	---
Marine Pollutant	No
<i>DOT (US)</i>	
Not dangerous goods	

Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance	Substance(s) is (are) either included in EINECS, ELINCS, NPL inventories or exempted
Hazard Symbol	Xi- Irritant
Risk Phrases	R 10 - Flammable. R 36/37/38 - Irritating to eyes, respiratory system, and skin.
Safety Phrases	S 02 - Keep out of the reach of children. S 26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39 - Wear suitable clothing, gloves and eye/face protection.
WGK Germany	2
Chemical safety assessment	Not available

Section 16: OTHER INFORMATION

Hazardous materials identification system	Fire:2 Health:2 Reactivity: 0 Personal Protection:B
This material should be used for industrial purposes only.	

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