



山东贵恒化工科技有限公司
Shandong GH Chemicals Co., Ltd

Material Safety Data Sheet

(MSDS)

Description in Chinese: 丙酸乙酯

Description in English: Ethyl Propanoate (EP)

Molecular Formula: C₅H₁₀O₂

CAS No.: 105-37-3

UN No.: 1195

Shandong GH Chemicals Co., Ltd

Material Safety Data Sheet

Section 1-Chemical Product and Company Identification

1. Product Identification

Chemical Name: Ethyl Propanoate (EP)

Synonyms: ETHYL PROPANOATE;ETHYL PROPIONATE;Ethyl n-propanoate;FEMA 2456;TRIANOIC ACID ETHYL ESTER;RARECHEM AL BI 0159;PROPIONIC ETHER;PROPIONIC ACID ETHYL ESTER

CAS No.: 105-37-3

Molecular Weight: 102.13

Chemical Formula: C₅H₁₀O₂

Manuf. : Shandong GH Chemicals Co., Ltd

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Section 2-Composition and Information on Ingredients


CAS #	Chemical Name	Content (%)	EINECS #
105-37-3	Ethyl Propanoate (EP)	99.1%	105-37-3

Section 3-Hazards Identification

Classification of the substance or mixture

Flammable liquids, Category 2

GHS label elements, including precautionary statements

Pictogram(s)	
Signal word	Danger
Hazard statement(s)	H225 Highly flammable liquid and vapour
Precautionary statement(s)	
Prevention	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P370+P378 In case of fire: Use ... to extinguish.
Storage	P403+P235 Store in a well-ventilated place. Keep cool.
Disposal	P501 Dispose of contents/container to ...

Other hazards which do not result in classification: Null

Section 4-First Aid Measures

Description of necessary 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. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed

Exposure can cause irritation of eyes, nose and throat. May cause shortness of breath or coughing.

High concentrations have a narcotic effect. May cause abdominal pain and vomiting if swallowed. (USCG, 1999)

Indication of immediate medical attention and special treatment needed, if necessary

N/A

Section 5-Firefighting Measures

Extinguishing media

Suitable extinguishing media

Water may be ineffective.

Specific hazards arising from the chemical

Special Hazards of Combustion Products: Irritating vapors and toxic gases, such as carbon dioxide and carbon monoxide, may be formed when involved in fire. Behavior in Fire: Vapors can flow along surfaces to distant ignition source and flash back. (USCG, 1999)

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Section 6-Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 8-Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Section 8-Exposure Controls & Personal Protection

Control parameters

Occupational Exposure limit values

N/A

Biological limit values

N/A

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. 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.

Respiratory protection

Wear dust mask when handling large quantities.

Thermal hazards

N/A

Section 9 Physical & Chemical Properties

Physical state	Colourless liquid with a fruity, rum-like, ethereal odour
Colour	Colorless liquid
Odour	REMINISCENT OF RUM & PINEAPPLE
Melting point/ freezing point	-10 °C(lit.)
Boiling point or initial boiling point and boiling range	99 °C(lit.)
Flammability	N/A
Lower and upper explosion limit / flammability limit	LOWER: 1.9% BY VOLUME IN AIR; UPPER: 11% BY VOLUME IN AIR
Flash point	12 °C
Auto-ignition temperature	475 °C
Decomposition temperature	N/A
pH	N/A
Kinematic viscosity	N/A
Solubility	In water:25 g/L (15 °C)
Partition coefficient n-octanol/water (log value)	log Kow= 1.21
Vapour pressure	40 mm Hg (27.2 °C)
Density and/or relative density	0.888g/mL at 25 °C(lit.)
Relative vapour density	3.52 (vs air)
Particle characteristics	N/A

Section 10-Stability & Reactivity

Reactivity: N/A

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions

A flammable liquid. A very dangerous fire and explosion hazard when exposed to heat or flame ...ETHYL PROPIONATE is an ester. Esters react with acids to liberate heat along with alcohols and acids. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Heat is also generated by the interaction of esters with caustic solutions. Flammable hydrogen is generated by mixing esters with alkali metals and hydrides. Can react with oxidizing agents, bases, and acids. Polymerization: Will not polymerize (USCG, 1999).

Conditions to avoid: N/A

Incompatible materials

... Can react vigorously with oxidizing materials.

Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

Section 11-Toxicological Information

Acute toxicity

Oral: LD50 Rat oral 8732 mg/kg
Inhalation: N/A
Dermal: N/A
Skin corrosion/irritation: N/A
Serious eye damage/irritation: N/A
Respiratory or skin sensitization: N/A
Germ cell mutagenicity: N/A
Carcinogenicity: N/A
Reproductive toxicity: N/A
STOT-single exposure: N/A
STOT-repeated exposure: N/A
Aspiration hazard: N/A

Section 12-Ecological Information

Toxicity

Toxicity to fish: N/A
Toxicity to daphnia and other aquatic invertebrates: N/A
Toxicity to algae: N/A
Toxicity to microorganisms: N/A

Persistence and degradability

Biodegradation in soil and water is expected to be an important environmental fate process because of the presence of an easily biodegraded ester functional group(1).

Bioaccumulative potential

An estimated BCF of 1.7 was calculated for ethyl propionate(SRC), using a log Kow of 1.21(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low.

Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc for ethyl propionate can be estimated to be about 12(SRC). According to a classification scheme(2), this estimated Koc value suggests that ethyl propionate is expected to have very high mobility in soil.

Other adverse effects: N/A

Section 13-Disposal Consideration

Disposal Considerations

Disposal methods

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

Section 14-Transport Information

UN Number

ADR/RID: UN1195

IMDG: UN1195

IATA: UN1195

UN Proper Shipping Name

ADR/RID: ETHYL PROPIONATE

IMDG: ETHYL PROPIONATE

IATA: ETHYL PROPIONATE

Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

Packing group, if applicable

ADR/RID: II

IMDG: II

IATA: II

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

Special precautions for user: no data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: no data available

Section 15-Regulatory Information

Chemical name	Common names and synonyms	CAS number	EC number
ethyl propionate	ethyl propionate	105-37-3	none
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.

Section 16-Other Information

Disclaimer

The MSDS above is based on the information currently available to us and described for health & environmental concern only. In no cases shall it be regarded as warranty of merchantability or warranty for any particular purpose, express or implied, with respect to the information. We assume no liability resulting from its use. Users should make investigation to determine the suitability of the information for their particular purpose. In no event shall we be liable for any claims, damages or losses.