

1. PRODUCT AND COMPANY IDENTIFICATION:

| | |
|---------------------|--|
| PRODUCT CODE | A0049 |
| PRODUCT NAME | ETHYL BUTYRATE |
| SUPPLIER | Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com |

FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)

2. HAZARD IDENTIFICATION:

Classification of the substance or mixture



GHS02 Flame
Flam. Liq. 3 H226 Flammable liquid and vapor

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
Flammable

Information concerning particular hazards for human and environment:
Not applicable

Label elements

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS)

Hazard pictograms



GHS02

Signal word

Warning

Hazard statements

Flammable liquid and vapor

Precautionary statements

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

Use explosion-proof electrical/ventilating/lighting/equipment

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

Ground/bond container and receiving equipment

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

Dispose of contents/container in accordance with local/regional/national/international regulations

Classification system

NFPA ratings (scale 0 - 4)



Health = 0
Fire = 3
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 0
Fire = 3
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT

Not applicable

vPvB

Not applicable

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

| | |
|------------------|---|
| SYNONYM | Butyric acid ethyl ester |
| Formula | C ₆ H ₁₂ O ₂ |
| Molecular Weight | 116.16 g/mol |

| | |
|----------|-----------|
| CAS-No | EC-No |
| 105-54-4 | 203-306-4 |

4. FIRST-AID GUIDE:

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

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

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

5. FIRE-FIGHTING GUIDE:**Conditions of flammability**

Flammable in the presence of a source of ignition when the temperature is above the flash point
Keep away from heat/sparks/open flame/hot surface. No smoking

Suitable extinguishing media

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

Special protective equipment for firefighters

Wear self contained breathing apparatus for firefighting if necessary

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information

Use water spray to cool unopened containers

6. ACCIDENTAL RELEASE GUIDE:**Personal precautions**

Use personal protective equipment. 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. Vapors can accumulate in low areas

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

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 (see section 13)

7. HANDLING AND STORAGE:

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge

Conditions for safe storage

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

8. EXPOSURE AND PERSONAL PROTECTION:

Contains no substances with occupational exposure limit values

Personal protective equipment

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)

Hand 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

Eye protection



Tightly sealed goggles

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 and body protection

Impervious clothing; 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

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance

Form LIQUID
Colour COLORLESS TO PALE YELLOW

Safety data

Melting point (°C) -93
Boiling point (°C) 120
Flash point (°F) Closed cup 77
Ignition temperature 463 °C (865 °F)
Vapor pressure (mm Hg @20 °C) 15.5
Water solubility MISCIBLE
Relative vapor density 4.0
Odor BANANA, PINEAPPLE

10. STABILITY AND REACTIVITY:**Chemical stability**

Stable under recommended storage conditions

Possibility of hazardous reactions

Vapors may form explosive mixture with air

Conditions to avoid

Heat, flames and sparks

Materials to avoid

Oxidizing agents, Bases, acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION:**Acute toxicity**

Oral LD50

LD50 Oral - rat - 13,000 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Coma.

Dermal LD50

LD50 Dermal - rabbit - > 2,000 mg/kg

Skin corrosion/irritation

Skin - rabbit - Moderate skin irritation - 24 h

Carcinogenicity**IARC**

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

ACGIH

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

NTP

No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

OSHA

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

Specific target organ toxicity - single exposure (Globally Harmonized System)

Inhalation - May cause respiratory irritation

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation

Ingestion May be harmful if swallowed

Skin May be harmful if absorbed through skin. Causes skin irritation

Eyes Causes eye irritation

Signs and Symptoms of Exposure

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

12. ECOLOGICAL INFORMATION:**Toxicity**

Toxicity to fish LC0 - Leuciscus idus melanotus - 35 mg/l - 48 h

LC50 - Leuciscus idus melanotus - 53 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates LC50 - Daphnia magna (Water flea) - 755 mg/l - 24 h

13. DISPOSAL RECOMMENDATIONS:**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. Contact a licensed professional waste disposal service to dispose of this material

Contaminated packaging

Dispose of as unused product

14. TRANSPORTATION INFORMATION:



DOT (US)

UN number: 1180 Class: 3 Packing group: III
Proper shipping name: ETHYL BUTYRATE



IMDG

UN number: 1180 Class: 3 Packing group: III
Proper shipping name: ETHYL BUTYRATE



IATA

UN number: 1180 Class: 3 Packing group: III
Proper shipping name: ETHYL BUTYRATE

15. REGULATORY INFORMATION:

OSHA Hazards

Flammable liquid, Irritant

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

Massachusetts Right to Know Components

| | | |
|----------------|----------|---------------|
| Ethyl butyrate | CAS-No | Revision Date |
| | 105-54-4 | 1993-04-24 |

Pennsylvania Right to Know Components

| | | |
|----------------|----------|---------------|
| Ethyl butyrate | CAS-No | Revision Date |
| | 105-54-4 | 1993-04-24 |

New Jersey Right to Know Components

| | | |
|----------------|----------|---------------|
| Ethyl butyrate | CAS-No | Revision Date |
| | 105-54-4 | 1993-04-24 |

California Prop 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

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Chemical safety assessment:

A Chemical Safety Assessment has not been carried out

16. OTHER INFORMATION:

The information in this MSDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the MSDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the MSDS. The user should review these regulations to ensure full compliance.

Prepared by Shanghai M&U International