



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE A0104
PRODUCT NAME METHYL BUTYRATE
SUPPLIER Shanghai M & U International Trade Co., Ltd.
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FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)

2. HAZARD IDENTIFICATION:

Risk advice to man and the environment

Highly flammable. Harmful by inhalation. Irritating to eyes, respiratory system and skin.

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

Formula	C ₅ H ₁₀ O ₂	
Molecular Weight	102,13 g/mol	
CAS-No.	EC-No.	Classification
623-42-7	210-792-1	F, Xn, R11 - R20 R36/37/38

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

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.

5. FIRE-FIGHTING GUIDE:

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions- Carbon oxides.

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 vapors 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 non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 12).

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:

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

Safety glasses with face shield conforming to EN166. 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. 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
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Safety data

Boiling point	102 - 103 °C - lit.
Flash point	14,0 °C - closed cup
Lower explosion limit	0,9 % (V)
Upper explosion limit	3,5 % (V)
Vapor pressure	53,3 hPa at 30,0 °C
Density	0,898 g/mL at 25 °C

10. STABILITY AND REACTIVITY:

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents, strong bases.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Carbon Oxides.

11. TOXICOLOGICAL INFORMATION:

Acute toxicity

LD50 Oral - rat - > 5.000 mg/kg

LC50 Inhalation - mouse - 2 h - 18.000 mg/m³ LD50 Dermal - rabbit - 3.560 mg/kg

Irritation and corrosion

Skin - rabbit - Skin irritation - 24 h

Chronic exposure

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.

Signs and Symptoms of Exposure

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

Potential Health Effects

Inhalation	Harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.

Additional Information

RTECS: ET5500000

12. 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. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

13. TRANSPORTATION INFORMATION:

DOT (US)

ADR/RID

UN-Number: 1237 Class: 3 Packing group: II
Proper shipping name: METHYL BUTYRATE

IMDG

UN-Number: 1237 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: METHYL BUTYRATE
Marine pollutant: No

IATA

UN-Number: 1237 Class: 3 Packing group: II
Proper shipping name: Methyl butyrate

14. REGULATORY INFORMATION:

Labeling according to EC Directives

Hazard symbols

F	Highly flammable
Xn	Harmful

R-phrases(s)

R11	Highly flammable.
R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.

S-phrase(s)

- S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

OTHER INFORMATION:

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Prepared by Shanghai M&U International