



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE A0073
PRODUCT NAME GAMMA-HEPTALACTONE
SUPPLIER Shanghai M & U International Trade Co., Ltd.
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FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)

2. HAZARD IDENTIFICATION:

Emergency Overview

OSHA Hazards

Irritant

GHS Classification

Skin irritation (Category 2)

GHS Label elements, including precautionary statements

Pictogram

Signal word

Warning

Hazard statement(s)

H315

Causes skin irritation.

HMIS Classification

Health hazard

1

Flammability

1

Physical hazards

1

NFPA Rating

Health hazard

1

Fire

1

Reactivity Hazard

0

Potential Health Effects

Inhalation

May be 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.

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

SYNONYM (±)-4-Heptanolide

(±)-γ-Propyl-γ-butyrolactone
(±)-Dihydro-5-propyl-2(3H)-furanone
Formula C7H12O2
Molecular Weight 128.17 g/mol

CAS-No EC-No
105-21-5 203-279-9

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:

Suitable extinguishing media

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

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.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE:

Precautions for safe handling

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

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

Safety glasses with side-shields conforming to EN166 Use equipment for eye protections tested and approved under appropriate government standards such as NOISH (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**

Color	COLORLESS TO PALE YELLOW
Boiling point (°C)	90
Flash point (°F)	Closed cup >200
Density @25 °C	0.995
Water solubility	Insoluble
Relative vapor density	>1
Odor	sweet, nut-like, caramel, coconut, hay coumarinic

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

Stable under recommended storage conditions.

Materials to avoid

N/A

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides.

11. TOXICOLOGICAL INFORMATION:**Acute toxicity**

Oral LD50 - rat - > 5,000 mg/kg

Inhalation LC50 - no data available

Dermal LD50 - rabbit - > 5,000 mg/kg

Skin corrosion/irritation

Skin - rabbit - Skin irritation

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.

ACGIH:

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

Potential health effects

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

Ingestion May be harmful if swallowed.

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

Eyes Causes eye irritation.

12. DISPOSAL RECOMMENDATIONS:**Product**

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.

13. TRANSPORTATION INFORMATION:**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14. REGULATORY INFORMATION:

OSHA Hazards

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

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Heptan-4-olide	105-21-5	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Heptan-4-olide	105-21-5	

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.

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