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# **MATERIAL SAFETY DATA SHEET (MSDS)**

# 1. Identification

1.1. GHS Product identifier Product name	Ketone Ester
1.2. Other means of identification	
Product number	
Other names	(3R)-3-Hydroxybutanoic acid (3R)-3-hydroxybutyl ester
1.3. Recommended use of the chemi	cal and restrictions on use
Identified uses	Scientific research uses.
Uses advised against	no data available
1.4. Supplier's details	
Ĉompany	SUZHOU MYLAND PHARM & NUTRITION INC.
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## 2. Hazard identification

#### **2.1. Classification of the substance or mixture** Not classified.

2.2. GHS label elements, including precautionary statements Pictogram(s)

Pictogram(s)	no data available
Signal word	no data available
Hazard statement(s)	no data available
Precautionary statement(s)	
Prevention	no data available
Response	no data available
Storage	no data available
Disposal	no data available
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2.3. Other hazards which do not result in classification no data available

# **3.** Composition/information on ingredients

### 3.1. Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Ketone Ester	Ketone Ester(3R)-3-Hydroxybutanoic acid (3R)-3-hydroxybutyl ester		-	100%

## 4. First-aid measures

#### 4.1. Description of necessary first-aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor. Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### **Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

# 4.2. Most important symptoms/effects, acute and delayed

no data available

**4.3. Indication of immediate medical attention and special treatment needed, if necessary** no data available

## 5. Fire-fighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media

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

- 5.2. Specific hazards arising from the chemical
  - no data available

### 5.3. Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 6. Accidental release measures

## 6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### 6.2. Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### 6.3. Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# 7. Handling and storage

### 7.1. Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### 7.2. Conditions for safe storage, including any incompatibilities

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

# 8. Exposure controls/personal protection

#### 8.1. Control parameters

**Occupational Exposure limit values** 

no data available **Biological limit values** 

no data available

#### 8.2. Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

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

## Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US). Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. 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**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator. **Thermal hazards** 

no data available

# 9. Physical and chemical properties

Physical state	liquid	
Odour	no data available	
Melting point	no data available	
Boiling point or initial boiling	no data available	
point and boiling range		
Flammability	no data available	
Lower and upper explosion limit	t no data available	
/ flammability limit		
Flash point	no data available	
Auto-ignition temperature	no data available	
Decomposition temperature	no data available	
рН	no data available	
Kinematic viscosity	no data available	
Solubility	no data available	
Partition coefficient n-	no data available	
octanol/water		
Vapour pressure	no data available	
Density and/or relative density	no data available	
<b>Relative vapour density</b>	no data available	
Particle characteristics	no data available	

# 10. Stability and reactivity

- 10.1. Reactivity no data available
- **10.2.** Chemical stability no data available
- 10.3. Possibility of hazardous reactions

no data available

- **10.4.** Conditions to avoid no data available
- **10.5. Incompatible materials** no data available
- **10.6. Hazardous decomposition products** no data available

## 11. Toxicological information

#### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available
- Skin corrosion/irritation
- no data available Serious eye damage/irritation
- no data available
- **Respiratory or skin sensitization**
- no data available Germ cell mutagenicity no data available Carcinogenicity no data available Reproductive toxicity no data available STOT-single exposure
- no data available **STOT-repeated exposure** no data available
- Aspiration hazard no data available

# **12. Ecological information**

- 12.1. Toxicity
  - Toxicity to fish: no data available
  - Toxicity to daphnia and other aquatic invertebrates: no data available

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- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available
- **12.2.** Persistence and degradability no data available
- **12.3. Bioaccumulative potential** no data available
- **12.4.** Mobility in soil no data available
- **12.5.** Other adverse effects no data available

# 13. Disposal considerations

13.1. Disposal methods Product 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.

# 14. Transport information

14.1.	UN Number		
	ADR/RID: Not dangerous goods.	IMDG: Not dangerous goods.	IATA: Not dangerous goods.
	(For reference only, please	(For reference only, please	(For reference only, please
	check.)	check.)	check.)
14.2.	UN Proper Shipping Name		
	ADR/RID: Not dangerous goods.	IMDG: Not dangerous goods.	IATA: Not dangerous goods.
	(For reference only, please	(For reference only, please	(For reference only, please
	check.)	check.)	check.)
14.3.	Transport hazard class(es)		
	ADR/RID: Not dangerous goods.	IMDG: Not dangerous goods.	IATA: Not dangerous goods.
	(For reference only, please	(For reference only, please	(For reference only, please
	check.)	check.)	check.)
14.4.	Packing group, if applicable		
	ADR/RID: Not dangerous goods.	IMDG: Not dangerous goods.	IATA: Not dangerous goods.
	(For reference only, please	(For reference only, please	(For reference only, please
	check.)	check.)	check.)
14.5.	Environmental hazards		
	ADR/RID: No	IMDG: No	IATA: No
14.6.	Special precautions for user		
	no data available		
14.7.	Transport in bulk according t	o Annex II of MARPOL 73/7	8 and the IBC Code
	no data available		

# 15. Regulatory information

## 15.1. Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Ketone Ester	(3R)-3-Hydroxybutanoic acid (3R)-3- hydroxybutyl ester	1208313-97-6	-
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)	
Vietnam National Chemical Inventory	Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	
Korea Existing Chemicals List (KECL)	

# 16. Other information

#### **Further information**

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