

Revision Date 23-Jun-2008

Revision Number 0

**1. PRODUCT AND COMPANY IDENTIFICATION****Product Identifier****Product Description:**

4,5-Dimethyl-3-hydroxy-2(5H)-furanone

**Cat No.**

248710000; 248710100; 248710500

**Synonyms**

Fenugreek Lactone; Sotolone; Sugar Lactone

**Relevant identified uses of the substance or mixture and uses advised against****Recommended Use**

Laboratory chemicals

**Uses advised against**

No Information available

**Details of the supplier of the safety data sheet****Company**

Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

**E-mail address**

begel.sdsdesk@thermofisher.com

**Emergency Telephone Number**

For information in the US, call: 001-800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300

CHEMTREC Phone Number, Europe: 001-703-527-3887

**2. HAZARDS IDENTIFICATION****Classification of the substance or mixture****REGULATION (EC) No 1272/2008**

Not hazardous

**Classification according to EU Directives 67/548/EEC or 1999/45/EC***For the full text of the R phrases mentioned in this Section, see Section 16***R -phrase(s)**

none

**Label Elements****Signal Word**

None

**Hazard Statements****Other Hazards**

No information available.

4,5-Dimethyl-3-hydroxy-2(5H)-furanone

Revision Date 23-Jun-2008

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
2(5H)-Furanone, 3-hydroxy-4,5-dimethyl- 28664-35-9	EEC No. 249-136-4	98	28664-35-9	-	-	-

For the full text of the R phrases mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

#### Description of first aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes Obtain medical attention
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes Obtain medical attention
<b>Ingestion</b>	Clean mouth with water Get medical attention
<b>Inhalation</b>	Remove from exposure, lie down Move to fresh air
<b>Notes to Physician</b>	Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing media

##### Suitable Extinguishing Media

Water spray Carbon dioxide (CO<sub>2</sub>) Dry chemical chemical foam

##### Extinguishing media which must not be used for safety reasons

No information available.

##### Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

##### Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

### 6. ACCIDENTAL RELEASE MEASURES

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

Ensure adequate ventilation

4,5-Dimethyl-3-hydroxy-2(5H)-furanone

Revision Date 23-Jun-2008

## Environmental precautions

Prevent further leakage or spillage if safe to do so

## Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable and closed containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid contact with skin and eyes Do not breathe dust Do not breathe vapors or spray mist Use only in area provided with appropriate exhaust ventilation

### Conditions for safe storage, including any incompatibilities

Keep in a dry place Keep container tightly closed Keep refrigerated

### Specific End Uses

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Derived No Effect Level (DNEL)

No information available.

#### Predicted No Effect Concentration (PNEC)

No information available.

### Exposure controls

#### Engineering Measures

Ensure adequate ventilation, especially in confined areas

#### Personal protective equipment

##### Eye Protection

Goggles

##### Hand Protection

Protective gloves

##### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

##### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical State

Liquid

### Appearance

Yellow

### odor

Stench

### pH

No information available.

### Vapor Density

No information available.

4,5-Dimethyl-3-hydroxy-2(5H)-furanone

Revision Date 23-Jun-2008

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point/Range	184°C / 363.2°F @ 760 mmHg
Melting Point/Range	No information available.
Flash Point	> 100°C / > 212°F
Autoignition Temperature	No information available.
Water Solubility	Insoluble
Specific Gravity	1.165
Molecular Formula	C6 H8 O3
Molecular Weight	128.13

## 10. STABILITY AND REACTIVITY

### Reactivity

### Chemical Stability

Stable.

### Possibility of Hazardous Reactions

**Hazardous Polymerization** No information available.

**Hazardous Reactions .** No information available.

### Conditions to Avoid

Incompatible products, Exposure to moist air or water.

### Incompatible Materials

Strong oxidizing agents, Acid anhydrides, Acid chlorides, Chloroformates, Reducing agents.

### Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

### Component Information

### Chronic Toxicity

**Carcinogenicity** There are no known carcinogenic chemicals in this product

### Sensitization

No information available.

### Mutagenic Effects

No information available

### Reproductive Effects

No information available.

### Developmental Effects

No information available.

4,5-Dimethyl-3-hydroxy-2(5H)-furanone

Revision Date 23-Jun-2008

## 11. TOXICOLOGICAL INFORMATION

**Target Organs**

No information available.

**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Endocrine Disruptor Information**

**Component**

2(5H)-Furanone, 3-hydroxy-  
4,5-dimethyl-

EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Group III Chemical		

## 12. ECOLOGICAL INFORMATION

**Toxicity**

**Ecotoxicity effects**

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment**

**Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste from Residues / Unused  
Products**

Dispose of in accordance with local regulations

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal

## 14. TRANSPORT INFORMATION

**IMDG/IMO**

Not regulated

**ADR**

Not regulated

**IATA**

Not regulated

4,5-Dimethyl-3-hydroxy-2(5H)-furanone

Revision Date 23-Jun-2008

## 14. TRANSPORT INFORMATION

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
2(5H)-Furanone, 3-hydroxy-4,5-dimethyl-	249-136-4	-		P	X	-	X	X	X	X	-

#### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory Lists

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

### Chemical Safety Assessment

## 16. OTHER INFORMATION

#### Text of R phrases mentioned in Section 2-3

No information available.

Revision Date 23-Jun-2008

Revision Summary Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

#### Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet