SECTION 1: Identification

1.1. Identification

Product form: Substance
Substance name: 4H-Pyran-4-one, 2-ethyl-3-hydroxy-
CAS-No.: 4940-11-8
Product code: (US) W05130
Formula: C7H8O3
Synonyms: Ethyl maltol / 2-Ethyl-3-hydroxy-4-pyrene / Pyran(4H)-4-one, 2-ethyl-3-hydroxy- / ETHYL HYDROXYPYRONE / 2-Ethyl-3-hydroxy-4-pyranone

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Synerzine
5340 Hwy 42 S
Ellenwood, Georgia 30294 - USA
T 404-524-6744 - F 404-577-1651
info@synerzine.com - www.synerzine.com

1.4. Emergency telephone number

Emergency number: Infotrac 1-800-535-5053 (Contract# 102471) Dial +1-352-323-3500 when outside the US

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Acute toxicity (oral) H302 Harmful if swallowed
Category 4
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling
Hazard pictograms (GHS-US)

Signal word (GHS-US): Warning
Hazard statements (GHS-US): H302 - Harmful if swallowed
Precautionary statements (GHS-US): P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P330 - Rinse mouth.
P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4H-Pyran-4-one, 2-ethyl-3-hydroxy-</td>
<td>(CAS-No.) 4940-11-8</td>
<td>98 - 100</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
</tbody>
</table>
Full text of hazard classes and H-statements: see section 16

**SECTION 4: First-aid measures**

4.1. **Description of first aid measures**

First-aid measures general: Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. **Most important symptoms and effects (acute and delayed)**

No additional information available

4.3. **Immediate medical attention and special treatment, if necessary**

Treat symptomatically.

**SECTION 5: Fire-fighting measures**

5.1. **Suitable (and unsuitable) extinguishing media**


5.2. **Specific hazards arising from the chemical**

Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

5.3. **Special protective equipment and precautions for fire-fighters**

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures**

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

6.1.1. **For non-emergency personnel**

Emergency procedures: Ventilate spillage area.

6.1.2. **For emergency responders**

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. **Environmental precautions**

Avoid release to the environment.

6.3. **Methods and material for containment and cleaning up**

Methods for cleaning up: Mechanically recover the product.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. **Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage**

7.1. **Precautions for safe handling**

Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions: Store in a well-ventilated place. Keep cool.

**SECTION 8: Exposure controls/personal protection**

8.1. **Control parameters**

No additional information available
8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid
Appearance: White crystalline powder.
Color: white
Odor: Sweet caramel-like notes of strawberry jam flavor
Odor threshold: No data available
pH: No data available
Melting point: No data available
Freezing point: Not applicable
Boiling point: 289 - 290 °C
Flash point: > 200 °F TCC
Relative evaporation rate (butyl acetate=1): No data available
Flammability (solid, gas): Non flammable.
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: Not applicable
Solubility: No data available
Log Pow: No data available
Auto-ignition temperature: Not applicable
Decomposition temperature: No data available
Viscosity, kinematic: Not applicable
Viscosity, dynamic: No data available
Explosion limits: Not applicable
Explosive properties: No data available
Oxidizing properties: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.
**4H-Pyran-4-one, 2-ethyl-3-hydroxy-**

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10.3.</strong></td>
<td>Possibility of hazardous reactions</td>
</tr>
<tr>
<td></td>
<td>No dangerous reactions known under normal conditions of use.</td>
</tr>
<tr>
<td><strong>10.4.</strong></td>
<td>Conditions to avoid</td>
</tr>
<tr>
<td></td>
<td>None under recommended storage and handling conditions (see section 7).</td>
</tr>
<tr>
<td><strong>10.5.</strong></td>
<td>Incompatible materials</td>
</tr>
<tr>
<td></td>
<td>No additional information available</td>
</tr>
<tr>
<td><strong>10.6.</strong></td>
<td>Hazardous decomposition products</td>
</tr>
<tr>
<td></td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>4H-Pyran-4-one, 2-ethyl-3-hydroxy- (4940-11-8)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral</td>
<td>1150 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1150 mg/kg body weight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

**12.2. Persistence and degradability**

No additional information available

**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Disposal methods**

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

**SECTION 14: Transport information**

Department of Transportation (DOT)

In accordance with DOT

Other information: No supplementary information available.
4H-Pyran-4-one, 2-ethyl-3-hydroxy-
Safety Data Sheet

Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations
4H-Pyran-4-one, 2-ethyl-3-hydroxy- (4940-11-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
4H-Pyran-4-one, 2-ethyl-3-hydroxy- (4940-11-8)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
4H-Pyran-4-one, 2-ethyl-3-hydroxy- (4940-11-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations
4H-Pyran-4-one, 2-ethyl-3-hydroxy- (4940-11-8)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations
No additional information available

SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H302</th>
<th>Harmful if swallowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.</td>
</tr>
<tr>
<td>1</td>
<td>Materials that must be preheated before ignition can occur.</td>
</tr>
<tr>
<td>0</td>
<td>Material that in themselves are normally stable, even under fire conditions.</td>
</tr>
</tbody>
</table>

Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semisolids having a flash point above 200 F. (Class IIIB)
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection : C
C - Safety glasses, Gloves, Synthetic apron
4H-Pyran-4-one, 2-ethyl-3-hydroxy-
Safety Data Sheet

Synerzine US

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.