1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name
Hinokitiol
Product Code
SC-200812

Recommended use of the chemical and restrictions on use
For research use only. Not intended for diagnostic or therapeutic use.

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification
Acute toxicity - Oral
Category 4

Label elements
Signal word
Warning
HARMFUL IF SWALLOWED

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Hazards not otherwise classified (HNOC)
Not applicable

Other Information

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Stability</th>
<th>Physical and chemical properties</th>
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3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 499-44-5  
Molecular Weight 164.2  
Formula C_{10}H_{12}O_{2}

<table>
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<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
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<td>499-44-5</td>
<td>&gt;98</td>
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</table>

4. FIRST AID MEASURES

First Aid Measures

General advice  If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye contact  Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact  Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation  Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Ingestion  Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting.

Self-protection of the first aider  Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms  No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians  Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media  Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media  None.

Specific hazards arising from the chemical

Specific hazards arising from the chemical  No information available.
Hazardous combustion products  Carbon oxides.

Explosion data

Sensitivity to Mechanical Impact  No information available.
Sensitivity to Static Discharge  No information available.

Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters  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

Personal precautions
Ensure adequate ventilation, especially in confined areas.

Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Prevent further leakage or spillage if safe to do so.
Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Noxious vapor/odor. Ensure adequate ventilation, especially in confined areas.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Store at room temperature.

Incompatible materials
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Appropriate engineering controls
Engineering Controls
Ensure adequate ventilation, especially in confined areas

Individual protection measures, such as personal protective equipment
Eye/face protection
Tight sealing safety goggles.
Skin and Body Protection
Wear protective gloves and protective clothing.
Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State
Solid
Appearance
powder
Odor
characteristic
10. STABILITY AND REACTIVITY

Reactivity
- Not applicable

Chemical stability
- Stable under recommended storage conditions.

Possibility of Hazardous Reactions
- None under normal processing.

Hazardous polymerization
- No information available.

Conditions to avoid
- Extremes of temperature and direct sunlight.

Incompatible materials
- Strong oxidizing agents.

Hazardous Decomposition Products
- Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
- No data available.

Eye contact
- No data available.

Skin Contact
- No data available.

Ingestion
- No data available.

Information on toxicological effects

Symptoms
- No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity
- No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity
- No information available.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
- 500 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity
- May cause long lasting harmful effects to aquatic life
100% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Persistence and degradability**
No information available.

**Bioaccumulation**
No information available.

**Mobility**
No information available.

### 13. DISPOSAL CONSIDERATIONS

**Disposal of wastes**
Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**
Do not reuse container.

**Other Information**
Waste codes should be assigned by the user based on the application for which the product was used.

### 14. TRANSPORT INFORMATION

**DOT**
Not regulated

**IMDG**
Not regulated

**IATA**
Not regulated

### 15. REGULATORY INFORMATION

**International Inventories**
All of the components in the product are on the following Inventory lists
- TSCA (United States):
- Canada (DSL/NDSL)
- Europe (EINECS/ELINCS/NLP)
- Australia (AICS)
- South Korea (KECL)
- China (IECSC)
- ENCS (Japan)
- Philippines (PICCS)

<table>
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<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
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* - Listed

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

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

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

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

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

**KECL** - Korean Existing and Evaluated Chemical Substances

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

**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**
- **Acute health hazard**: Yes
- **Chronic Health Hazard**: No
- **Fire hazard**: No
- **Sudden release of pressure hazard**: No
Reactive hazard

No

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**US State Regulations**

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**
This product does not contain any substances regulated by state right-to-know regulations

### 16. OTHER INFORMATION

**Revision note**
No information available

**Disclaimer**
The information provided in this Material Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

*End of Safety Data Sheet*