Section 1. Product and Company Identification

Product Name: Glabridin  
Product ID: G4400  
Chemical Name (Synonyms): (R)-4-(3,4-Dihydro-8,8-dimethyl-2H,8H-benzo[1,2-b:3,4-b']dipyran-3-yl)-1,3-benzenediol  
Supplier: LKT Laboratories, Inc  
545 Phalen Blvd.  
St. Paul, MN 55130 USA  
Ph: 651-644-8424 Fax: 651-644-8357  
www.lktlabs.com - getinfo@lktlabs.com  
Emergency Phone #: 1-800-424-9300

Section 2. Hazards Identification

GHS Classification: Chronic aquatic toxicity (Category 4), H413

GHS Label elements including precautionary statements

Pictogram

Signal word

Hazard and precautionary statements

Hazard statement  
H413 - May cause long lasting harmful effects to aquatic life.  
Precautionary statements  
P273 - Avoid release to the environment.  
P501 - Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 0  
Chronic health hazard:  
Flammability: 1  
Physical hazard: 0

NFPA Rating

Health hazard: 0  
Fire hazard: 1  
Reactivity hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.  
Skin: May be harmful if absorbed through skin. May cause skin irritation.  
Eyes: May causes eye irritation.
Ingestion: May be harmful if swallowed.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Formula</th>
<th>Formula Wt.</th>
<th>CAS No.</th>
<th>EC No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C$<em>{20}$H$</em>{20}$O$_4$</td>
<td>324.37</td>
<td>59870-68-7</td>
<td></td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice

Eye Contact
Flush eyes with water as a precaution.

Skin Contact
Wash off with soap and plenty of water.

Inhalation
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth with water.

Section 5. Firefighting Measures

Flash Point
267°C (513°F) - closed cup

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

Firefighting Procedures
Wear self-contained breathing apparatus for firefighting if necessary.

Unusual Fire Hazards

Section 6. Accidental Release Measures

Personal Precautions
Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental Precautions
No special environmental precautions required.

Methods and materials for containment and cleanup
Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling
Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Recommend storage temperature: Ambient.

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

Other Remarks

## Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**

**EXPOSURE CONTROLS**
Contains no substances with occupational exposure limit values. Hazardous components without workplace control parameters.

**PERSONAL PROTECTION**

**Eye/face protection** - Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Skin 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.

**Body protection** - Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection** - Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>White to off-white powder.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
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<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
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</thead>
<tbody>
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<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
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</thead>
<tbody>
<tr>
<td>DMSO ≥14 mg/mL</td>
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</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
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</thead>
<tbody>
<tr>
<td>267 °C (513 °F) - closed cup</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower explosion limit</th>
<th>Autoignition temperature</th>
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</thead>
<tbody>
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<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Upper explosion limit</th>
<th>Vapor pressure</th>
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</thead>
<tbody>
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<td>Not available.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
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</thead>
<tbody>
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<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>log Pow: 4.621</td>
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</table>

<table>
<thead>
<tr>
<th>Relative vapor density</th>
<th>Evaporation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

## Section 10. Stability and Reactivity

**Stability**

Stable under recommended storage conditions.

**Materials To Avoid**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides.
Section 11. Toxicological Information

**Oral LD50** Not available.

**Inhalation LC50** Not available.

**Dermal LD50** Not available.

**Other information on acute toxicity** Not available.

**Skin corrosion/irritation** Not available.

**Serious eye damage/irritation** Not available.

**Respiratory or skin sensitization** Not available.

**Germ cell mutagenicity** Not available.

**Reproductive Toxicity** Not available.

**Aspiration Hazard** Not available.

**Synergistic effects** Not available.

**Specific organ toxicity single exposure (GHS)** Not available.

**Specific organ toxicity repeated exposure (GHS)** Not available.

**Additional Information** RTECS: Not available.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Signs and symptoms of exposure** Not available.

**Potential Health Effects** Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. Skin: May be harmful if absorbed through skin. May cause skin irritation. Eyes: May cause eye irritation. Ingestion: May be harmful if swallowed.

**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. 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.

Section 12. Ecological Information

**Toxicity** Not available.

**Mobility in soil** Not available.

**PBT and vPvB assessment** Not available.
Waste Disposal
Dispose of material according to all federal, state, and local regulations. Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Persistence and degradability Not available.
Bioaccumulative potential Not available.

Section 13. Disposal Considerations
Disable Disposal
Dispose of material according to all federal, state, and local regulations. Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 14. Transport Information
DOT (US) Not dangerous goods.
IATA Not dangerous goods.
IMDG Not dangerous goods.

Section 15. Regulatory Information
Reach No.
SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components 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 Components No SARA hazards.

Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components Glabridin CAS #: 59870-68-7 Revision Date:
New Jersey Right To Know Components Glabridin CAS #: 59870-68-7 Revision Date:
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.

Section 16. Other Information
Other information The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.