Section 1. Product and Company Identification

Product Name: Quercetin dihydrate
Product ID: Q8016
Chemical Name (Synonyms): CCRIS 3304
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: Acute toxicity, Oral (Category 3), H301

GHS Label elements including precautionary statements

Pictogram
Signal word: Danger
Hazard and precautionary statements
Hazard statement:
H301 - Toxic if swallowed.
Precautionary statements:
P364 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P330 - Rinse mouth.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification
Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazard: 0

NFPA Rating
Health hazard: 2
Fire hazard: 0
Reactivity hazard: 0

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

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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_{15}H_{10}O_{7} \cdot 2H_{2}O</td>
<td>338.26</td>
<td>6151-25-3</td>
<td>204-187-1</td>
</tr>
</tbody>
</table>

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Section 4. First Aid Measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact
Flush eyes with water as a precaution.

Skin Contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

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

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

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Section 5. Firefighting Measures

Flash Point
Not available.

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

Firefighting Procedures
Wear self-contained breathing apparatus and protective clothing.

Unusual Fire Hazards
Carbon oxides

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Section 6. Accidental Release Measures

Personal Precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, dust or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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

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Section 7. Handling and Storage

Handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage Conditions
Store in a cool, dry place in a tightly closed container. Recommended storage temperature: 4˚C

Hazardous Decomposition Products
Not available.

Other Remarks
None.
Section 8. Exposure Controls PERSONAL PROTECTION

EXPOSURE CONTROLS
Contains no substances with occupational exposure limit values.
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

PERSONAL PROTECTION
Eye/face protection: Face shield and safety glasses. 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. Full and splash contact - Material: nitrile rubber. Minimum layer thickness: 0.11 mm, Break through time: 480 min. Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).

Body protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirator 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>Yellow or greenish-yellow crystalline powder.</td>
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<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>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
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<tbody>
<tr>
<td>314°C(dec)</td>
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</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
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</thead>
<tbody>
<tr>
<td>Soluble in ethanol. Insoluble in water.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
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</thead>
<tbody>
<tr>
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<td>Not available.</td>
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</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
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</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
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</tbody>
</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
Keep Away from strong oxidizing agents and strong acids.

Hazardous Decomposition Products
Not available.
Section 11. Toxicological Information

Oral LD50
Mouse - 159 mg/kg

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
Laboratory experiments have shown mutagenic effects.

Reproductive Toxicity
Not available.

Aspiration Hazard
Not available.

Specific organ toxicity single exposure (GHS)
Not available.

Synergistic effects
Not available.

Specific organ toxicity repeated exposure (GHS)
Not available.

Additional Information
RTECS: LK8950000
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Teratogenicity
Not available.

Signs and symptoms of exposure
Not available.

Potential Health Effects
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: May cause eye irritation.
Ingestion: Acute toxicity. Toxic 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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
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 as chemical safety assessment not required/ not
Persistence and degradability Not available. Other adverse effects Not available.

Bioaccumulative potential Not available.

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

Section 14. Transport Information
IMDG UN number: 2811 Class: 6.1 Packing group: III Proper shipping name: toxic solids, organic, n.o.s. (3,3',4',5,7-Pentahydroxyflavone dihydrate)

Further Information

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 Acute health hazard

Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components Quercetin dihydrate CAS #: 6151-25-3 Revision Date:
New Jersey Right To Know Components Quercetin dihydrate CAS #: 6151-25-3 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.