Section 1. Product and Company Identification

**Product Name**
Luteolin

**Product ID**
L8377

**Chemical Name (Synonyms)**
3',4',5,7-Tetrahydroxyflavone; Digitoflavone; Cyanidenon

**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**
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements including precautionary statements

**Pictogram**

**Signal word**
Warning

**Hazard and precautionary statements**

**Hazard statements**
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

**Precautionary statements**
P261 - Avoid breathing dust, fumes, gas, mist, vapors and spray.
P264 - Wash skin thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, eye protection and face protection.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P332 + P313 - If skin irritation occurs: Get medical advice/attention.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
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: Causes eye irritation.
Ingestion: May be harmful if swallowed.

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**Section 3. Composition/Information on Ingredients**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Formula</th>
<th>CAS No.</th>
<th>Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C15H10O6</td>
<td></td>
<td>491-70-3</td>
<td>286.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>207-741-0</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 plenty of water for at least 15 minutes and consult a physician.

**Skin Contact**
Wash off with soap and plenty of water. 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 powder or carbon dioxide.

**Firefighting Procedures**
Wear self-contained breathing apparatus and protective clothing for firefighting if necessary.

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**Section 6. Accidental Release Measures**

**Personal Precautions**
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, dust, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental Precautions**
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 adequate exhaust ventilation at places where dust is formed. area. Use only in a chemical fume hood. Wash thoroughly after handling material.

**Storage Conditions**
Store in a dry and well-ventilated place in a tightly closed container. Recommended store temperature is +4°C.

**Hazardous Decomposition Products**
Carbon monoxide and carbon dioxide.

**Other Remarks**
None.
Section 8. Exposure Controls/Personal Protection

Personal protective equipment

EXPOSURE CONTROLS
Contains no substances with occupational exposure limit values.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

PERSONAL PROTECTION
Eye/face protection: Safety glasses with side-shields conforming to EN 166. 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: Dermatitis® (KCL 740 / Aldrich 2677272, Size M).

Body protection: Protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures, use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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>Yellow crystalline powder.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>330°C (lit.)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in methanol and alkaline solutions. Slightly soluble in water. DMSO to 57 mg/mL, Ethanol to 6mg/mL.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Slightly soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>Materials To Avoid</td>
<td>Keep away from strong oxidizing agents.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon monoxide and carbon dioxide.</td>
</tr>
</tbody>
</table>
### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other information on acute toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific organ toxicity single exposure (GHS)</td>
<td>Inhalation - May cause respiratory irritation.</td>
</tr>
<tr>
<td>Specific organ toxicity repeated exposure (GHS)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Potential Health Effects</td>
<td>Inhalation: May be harmful if inhaled. Causes respiratory tract irritation. Skin: May be harmful if absorbed through skin. Causes skin irritation. Eyes: Causes eye irritation. Ingestion: May be harmful if swallowed.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Section 12. Ecological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>Not available.</td>
</tr>
<tr>
<td>PBT and vPvB assessment</td>
<td>PBT/vPvB assessment not available as chemical safety assessment not required/ not</td>
</tr>
</tbody>
</table>
Persistence and degradability  Not available.

Bioaccumulative potential  Not available.

Other adverse effects  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

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  Acute health hazard and chronic health hazard.

Massachusetts Right To Know Components  No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components  2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-4-benzopyrone  CAS No.  491-70-3  Revision Date:

New Jersey Right To Know Components  2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-4-benzopyrone  CAS No.  491-70-3  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.