MATERIAL SAFETY DATA SHEET
QUERCETIN DIHYDRATE

1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Quercetin dihydrate
Synonyms: 3,3’,4’,5,7-Pentahydroxyflavone dihydrate
Company Identification: Sisco Research Laboratories Pvt. Ltd.
Andheri (East), Mumbai – 400 099.
Tel : +91 22 2687 2601
Fax : +91 22 2687 8241
Website : www.srlchem.com

2 - COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>6151-25-3</td>
<td>Quercetin dehydrate</td>
<td>min 99%</td>
<td>204-187-1</td>
</tr>
</tbody>
</table>

3 - HAZARDS IDENTIFICATION

Risk advice to man and the environment
Toxic if swallowed.

4 - FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.
Eyes: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin: Wash off with soap and plenty of water. Consult a physician.
Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Inhalation: If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

Notes to Physician:

5 - FIRE FIGHTING MEASURES

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary.

6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. 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 for cleaning up:** Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

### 7 – HANDLING AND STORAGE

**Handling:** Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Storage:** Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

**Engineering Controls:**

**General Hygiene Measures:**

**Personal Protective Equipment**

**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 respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand Protection:** Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

**Eye Protection:** Safety glasses

**Skin and body protection:** Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### 9 - PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Solid, Powder

**Molecular Formula:** $C_{15}H_{10}O_{7}.2H_2O$

**Molecular Weight:** 338.27

### 10 - STABILITY AND REACTIVITY

**Storage stability:** Stable under recommended storage conditions.

**Materials to avoid:** Strong oxidizing agents, Strong acids

**Hazardous decomposition products**

**Hazardous decomposition**
products formed under fire conditions.: Carbon oxides

11 - TOXICOLOGICAL INFORMATION

**Acute toxicity:** LD50 Oral - mouse - 159 mg/kg

**Remarks:** Behavioral: Somnolence (general depressed activity). Behavioral: Muscle weakness. Respiratory disorder

**Irritation and corrosion:** No data available

**Sensitisation:** No data available

**Chronic exposure:** Laboratory experiments have shown mutagenic effects.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**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** Toxic if swallowed.

12 - ECOLOGICAL INFORMATION

No data available.

13 - DISPOSAL CONSIDERATIONS

**Product:** Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging:** Dispose of as unused product.

14 - TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic Solid, Organic</td>
<td>N.O.S.</td>
<td>N.O.S.</td>
</tr>
<tr>
<td>6.1</td>
<td>6.1</td>
<td>6.1</td>
</tr>
<tr>
<td>2811</td>
<td>2811</td>
<td>2811</td>
</tr>
<tr>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
</tbody>
</table>

15 - REGULATORY INFORMATION

**Labelling according to EC Directives**

**Hazard symbols** T Toxic
R-phrase(s)   R25 Toxic if swallowed.
S-phrase(s)   S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16 - ADDITIONAL INFORMATION

SISCO RESEARCH LABORATORIES provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.