1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Rutin
Product Number : CN000399
Brand : PUSH
Company : Chengdu Push Bio-technology Co., Ltd.
No.8 West Wuke second road, Wuhou District, Chengdu City, Sichuan Province, China
Telephone : 86-28-85370565-215
Fax : 86-28-85370565-777
Emergency Phone # : 86-28-85370565-215

2. HAZARDS IDENTIFICATION

OSHA Hazards
Irritant.

GHS Label elements, including precautionary statements

Pictogram

Signal word : Warning

Hazard statement(s)
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement(s)
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

HMIS Classification

Health hazard: 1

Flammability: 1

Physical hazards: 0

NFPA Rating

Health hazard: 1

Fire: 1

Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful in contact with skin. Causes skin irritation.

Eyes Causes serious eye irritation.

Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Rutin

CAS#: 153-18-4

Formula: \( C_{27}H_{30}O_{16} \)

Molecular Weight: 610.521
4. FIRST AID MEASURES

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

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

In case of skin contact
Wash off with soap and plenty of water. Consult a doctor.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a doctor.

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 and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed.

Recommended storage temperature: 2 – 8 °C

Keep in a dry place.

8. EXPOSURE CONTROLS/PERS...
Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Light yellow to yellow solid

Safe data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>no data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>125 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>no data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>325°C</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Methanol, DMSO</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Conditions to avoid
Light.
Heat.

Materials to avoid
Strong oxidizing agents.

Hazardous decomposition products
Formation of toxic gases is possible during heating or in case of fire.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Route</th>
<th>Species</th>
<th>Dose</th>
</tr>
</thead>
</table>

No.8  Wuke West Second Road, Wuhou district, Chengdu, Sichuan, China, 610045
Tel: 86-28-85370565-215  Fax: 86-28-85370565-777
Website: http://www.push-herbchem.com
<table>
<thead>
<tr>
<th>LD50</th>
<th>Route</th>
<th>Species</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intraperitoneal</td>
<td>Rodent - rat</td>
<td>2 gm/kg</td>
</tr>
<tr>
<td></td>
<td>Intraperitoneal</td>
<td>Rodent - mouse</td>
<td>200 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Intravenous</td>
<td>Rodent - mouse</td>
<td>950 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Intraperitoneal</td>
<td>Rodent - guinea pig</td>
<td>2 gm/kg</td>
</tr>
</tbody>
</table>

Other multiple dose toxicity data

no data available

Tumorigenic data

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Route</th>
<th>Species</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDLo</td>
<td>Oral</td>
<td>Rodent - rat</td>
<td>973 gm/kg/3Y-C</td>
</tr>
</tbody>
</table>

Mutation data

<table>
<thead>
<tr>
<th>Type of test</th>
<th>System</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutation in microorganisms</td>
<td>Bacteria - Salmonella typhimurium</td>
<td>80 ug/plate</td>
</tr>
<tr>
<td>DNA repair</td>
<td>Bacteria - Escherichia coli</td>
<td>100 mg/L</td>
</tr>
<tr>
<td>Specific locus test</td>
<td>Insect - Drosophila melanogaster</td>
<td>50 mmol/L</td>
</tr>
<tr>
<td>Body fluid assay</td>
<td>Rodent - rat Bacteria - Salmonella typhimurium</td>
<td>2 gm/kg</td>
</tr>
</tbody>
</table>

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>May be harmful if swallowed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>May be harmful in contact with skin. Causes skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>
Signs and Symptoms of Exposure

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

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
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

DOT (US)
15. REGULATORY INFORMATION

OSHA Hazards
Irritant.

DSL Status
This product contains the following components that are not on the Canadian DSL nor NDSL lists.
4H-1-Benzopyran-4-one, 3-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-
CAS-No. 153-18-4

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the thresh (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard

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

Pennsylvania Right To Know Components
4H-1-Benzopyran-4-one, 3-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-
15. OTHER INFORMATION

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.