Section 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Chrysophanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product ID</td>
<td>C2970</td>
</tr>
<tr>
<td>Chemical Name (Synonyms)</td>
<td>Chrysophanic acid; Turkey rhubarb.</td>
</tr>
<tr>
<td>Supplier</td>
<td>LKT Laboratories, Inc</td>
</tr>
<tr>
<td></td>
<td>545 Phalen Blvd.</td>
</tr>
<tr>
<td></td>
<td>St. Paul, MN 55130 USA</td>
</tr>
<tr>
<td>Emergency Phone #</td>
<td>1-800-424-9300</td>
</tr>
</tbody>
</table>

Section 2. Hazards Identification

GHS Classification

- Skin irritation (Category 2), H315
- Eye irritation (Category 2A), H319

GHS Label elements including precautionary statements

- **Pictogram**: Warning
- **Signal word**: Warning
- **Hazard and precautionary statements**
  - **H315** - Causes skin irritation.
  - **H319** - Causes serious eye irritation.
  - Precautionary statements
    - P264 - Wash skin thoroughly after handling.
    - P280 - Wear protective gloves, eye protection and face protection.
    - P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
    - 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).
    - P332 + P313 - If skin irritation occurs: Get medical advice and/or attention by a physician.
    - P337 + P313 - If eye irritation persists: Get medical advice and/or attention by a physician.
    - P362 - Take off contaminated clothing and wash before reuse.

HMIS Classification

- Health hazard: 2
- Chronic health hazard: *
- Flammability: 0
- Physical hazard: 0

NFPA Rating

- Health hazard: 0
- Fire hazard: 0
- Reactivity hazard: 0

Potential Health Effects

- Inhalation - May be harmful if inhaled. May cause respiratory irritation.
- Skin - May be harmful if absorbed through skin. Causes skin irritation.
- Eyes - Causes serious eye irritation.
Ingestion - May be harmful if swallowed.

Section 3. Composition/Information on Ingredients

Substances

<table>
<thead>
<tr>
<th>Formula</th>
<th>Formula Wt.</th>
<th>CAS No.</th>
<th>EC No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C_15_ H_10_ O_4</td>
<td>254.24</td>
<td>481-74-3</td>
<td>207-572-2</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice

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

Eye Contact

Rinse thoroughly 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.

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 for fire fighting if necessary.

Unusual Fire Hazards

Not available.

Section 6. Accidental Release Measures

Personal Precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation.

Environmental Precautions

Do not let product enter drains.

Methods and materials for containment and cleanup

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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.

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: +4˚C.

Hazardous Decomposition Products

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

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: Hand 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: Impervious clothing. The type of 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 powder.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>196°C</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practically insoluble in water, freely. Soluble in boiling alcohol, benzene or acetone.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Lower explosion limit</th>
<th>Autoignition temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</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>Practically insoluble in water, freely.</td>
<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>Not available.</td>
<td>Not available.</td>
</tr>
</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
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.

Specific organ toxicity single exposure (GHS) Not available.

Specific organ toxicity repeated exposure (GHS) Not available.

Synergistic effects Not available.

Teratogenicity Not available.

Additional Information RTECS: CB6725000

Potential Health Effects Inhalation - May be harmful if inhaled. May cause respiratory irritation.
Skin - May be harmful if absorbed through skin. Causes skin irritation.
Eyes - Causes serious 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.
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 PBT/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 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.

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  Chrysophanol  CAS No. 481-74-3  Revision Date:

New Jersey Right To Know Components  Chrysophanol  CAS No. 481-74-3  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.