Material Safety Data Sheet

Section 1: Product and Company Information

Product Name
Sirius red/fast green collagen staining kit

Catalog Number(s)
9046

Company
Chondrex, Inc.

Section 2: Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3% picric acid solution</td>
<td>88-89-1</td>
</tr>
<tr>
<td>50% methanol solution</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

Section 3: Hazards Identification

Emergency Overview
Toxic. Explosive when dry. Forms very sensitive explosive metallic compounds. Toxic by inhalation, in contact with skin and if swallowed. May cause sensitization by skin contact. Readily absorbed through skin. Target organ(s): blood, kidneys.

<table>
<thead>
<tr>
<th>HMIS Rating</th>
<th>NFPA Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health – 2</td>
<td>Health – 2</td>
</tr>
<tr>
<td>Flammability – 3</td>
<td>Flammability – 3</td>
</tr>
<tr>
<td>Reactivity – 2</td>
<td>Reactivity – 2</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

Oral Exposure
If swallowed, wash out mouth with copious amounts of water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing becomes difficult, give oxygen.

Dermal Exposure
In case of skin contact, immediately wash skin with soap and copious amounts of water. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
Section 5: Fire Fighting Measures

Explosion Hazards: Dry material is explosive. If material is involved in a fire, evacuate the area and allow it to burn. If not involved in a fire, keep material wet.

Explosion Data: Sensitivity to mechanical impact: may be shock-sensitive if dry.

Flash Point: N/A

Autoignition Temp: N/A

Flammability: N/A

Extinguishing Media Water spray, carbon dioxide, dry chemical powder, or appropriate foam

Protective Equipment Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazards N/A

Section 6: Accidental Release Measures

Procedure(s) of Personal Precaution(s) and Environmental Precaution(s)
Evacuate area. Contain spill. If solids are present, add water to the solids without stirring. Recover spilled materials into a non-metallic water impervious container. Keep spilled material wet with water. Do not allow to dry! Use a spill response pad or damp pillow with water to absorb remaining spilled material according to government regulations. Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Clean Up
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7: Handling and Storage

Handling
Do not breathe vapor. Avoid prolonged or repeated exposure. Do not get in eyes, on skin, or on clothing. Material must be wet at all times.

Storage
Keep tightly closed. Store as indicated on product label.

Section 8: Exposure Controls/Personal Protective Equipment

Engineering Controls
Use only in chemical fume hood. Safety shower and eye bath.

Personal Protective Equipment
Use respirators approved under appropriate government standards.
Compatible chemical-resistant gloves
Chemical safety goggles
Laboratory coat

General Hygiene Measures
Wash thoroughly after handling.
### Section 9: Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>229.11</td>
</tr>
<tr>
<td>SG/Density</td>
<td>1.005 g/cm³, 0.791 g/ml</td>
</tr>
</tbody>
</table>

### Section 10: Stability and Reactivity

<table>
<thead>
<tr>
<th>Stability</th>
<th>Stable under normal handling procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to Avoid</td>
<td>Picric acid forms salts with many metals some of which are rather sensitive to heat, friction, or impact, e.g., lead, iron, zinc, nickel, copper, etc., and should be considered dangerously sensitive. The salts formed with ammonia and amines, and the molecular complexes with aromatic hydrocarbons, etc., are in general no so sensitive. Contact of picric acid with concrete floors may form the friction sensitive calcium salt. Dispose of material older than 2 years. Inspect and add water every six months as needed.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon monoxide, carbon dioxide, nitrogen oxides.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur</td>
</tr>
</tbody>
</table>
**Section 11: Toxicological Information**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>May cause skin irritation.</td>
</tr>
<tr>
<td>Skin Absorption</td>
<td>May be harmful if absorbed through the skin.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
<tr>
<td>Target Organs</td>
<td>Blood, kidneys, liver.</td>
</tr>
</tbody>
</table>

**Signs and Symptoms**

May cause discoloration of the skin. Picric acid dust causes sensitization dermatitis. This usually occurs on the face, especially around the mouth and the sides of the nose; the condition progresses from edema, through the formation of papules and vesicles, to ultimate desquamation. Inhalation of high concentrations of dust has caused unconsciousness, weakness, muscle pain, and kidney problems. Swallowing picric acid may cause a bitter taste, headache, dizziness, nausea, vomiting, and diarrhea. High doses may cause destruction of the red blood cells and damage to the kidneys and liver with blood in the urine.

**Section 12: Ecological Information**

Data not available

**Section 13: Disposal Considerations**

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

**Section 14: Transport Information**

This substance is considered to be non-hazardous for transport by DOT and IATA.
Section 15: Regulatory Information

EU Additional Classification
R: 1-4
Explosive when dry. Forms very sensitive explosive metallic compounds.
S: 35
This material and its container must be disposed of in a safe way.

US Classification
Toxic. Explosive when dry. Forms very sensitive explosive metallic compounds. Toxic by inhalation, in contact with skin and if swallowed. May cause sensitization by skin contact. Keep container tightly closed. Keep away from sources of ignition – no smoking. In case of contact with eye, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show label when possible). Readily absorbed through skin. Target organ(s): blood, kidneys.

US Regulatory Information
SARA Listed: Yes
Deminimis: 1%
This product is subject to SARA section 313 reporting requirements.

Canada Regulatory Information
WHMIS classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR. DSL: No.

Section 16: Other Information
For R&D use only. Not for drug, household, or other uses. The above information is believed to be correct, but does not claim to be all inclusive and shall be used only as a guide. Chondrex, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.