SPARTAN CHEMICAL CO., INC.
MATERIAL SAFETY DATA SHEET

SECTION I
PRODUCT IDENTIFICATION

PRODUCT NAME OR NUMBER (as it appears on label)
SPARCREME (NEW & IMPROVED)

MANUFACTURER'S NAME
Spartan Chemical Co., Inc.

ADDRESS (NUMBER, STREET, CITY, STATE AND ZIP CODE)
110 N. Westwood Ave., Toledo, OH 43607

SECTION II
HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>CAS REGISTRY NO.</th>
<th>%W</th>
<th>CHEMICAL NAME(S)</th>
<th>OSHA Table Z-3</th>
<th>LISTED AS A CARCINOGEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-92-9</td>
<td>1-5</td>
<td>Citric acid</td>
<td>---</td>
<td>no</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>25.0</td>
<td>Silica, crystalline quartz (respirable)</td>
<td>10 mg/m³</td>
<td>IARC*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NTP - no</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA - no</td>
</tr>
</tbody>
</table>

*IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans (Volume 42, 1987) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and that there is limited evidence of the carcinogenicity of crystalline silica to humans. (IARC Class 2A) Please see Section V - Health Hazard Data.

SECTION III
PHYSICAL DATA

<table>
<thead>
<tr>
<th>BOILING POINT</th>
<th>SPECIFIC GRAVITY (H₂O = 1)</th>
<th>PERCENT SOLID BY WEIGHT (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>212°F</td>
<td>1.185</td>
<td>30-35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VAPOR PRESSURE</th>
<th>EVAPORATION RATE (but. ace. = 1)</th>
<th>APPEARANCE AND ODOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ 75 °F 80 °C</td>
<td>18 mm Hg 18 psi</td>
<td>Light green viscous creme, line fragrance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOLUBILITY IN WATER</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand - insoluble</td>
<td>2.0-2.5</td>
</tr>
</tbody>
</table>

| IS MATERIAL: | (LIQUID) SOLID GAS PASTE POWDER |

SECTION IV
FIRE AND EXPLOSION HAZARD DATA

<table>
<thead>
<tr>
<th>FLAMMABLE LIMITS</th>
<th>METHOD USED</th>
<th>EXTINGUISHING MEDIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>n/a</td>
<td>ASTM - D92</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECIAL FIRE FIGHTING PROCEDURES</th>
<th>UNUSUAL FIRE AND EXPLOSION HAZARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE - Under normal use conditions, in a liquid state, these precautions do not apply. However, if sufficient quantities are allowed to dry and the crystalline silica particles become airborne, the manufacturer of the respirable crystalline silica states the following medical conditions may be generally aggravated by exposure to these airborne particles: Pulmonary function may be reduced by inhalation of respirable crystalline silica. Also lung scarring produced by such inhalation may lead to a progressive massive fibrosis of the lung (silicosis) which may aggravate other pulmonary conditions and diseases and which increases susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effect of exposure.

PRIMARY ROUTES OF ENTRY  INHALATION  X  SKIN CONTACT  ____  OTHER (SPECIFY)  ____

CONDITIONS AGGRAVATED BY USE - See Effects of Overexposure

EMERGENCY AND FIRST AID PROCEDURES - The manufacturer of the respirable crystalline silica states:
For sand in eyes, wash immediately with water. If irritation persists, seek medical attention. For
gross inhalation, remove person immediately to fresh air, give artificial respiration as needed, seek
medical attention as needed.

SECTION VI - REACTIVITY DATA

STABILITY: UNSTABLE  ____  STABLE  X  ____

INCOMPATIBILITY (MATERIALS TO AVOID)
The manufacturer of the respirable crystalline silica states: Contact with powerful oxidizing agents such as
fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.

HAZARDOUS DECOMPOSITION PRODUCTS
Unknown

HAZARDOUS MAY OCCUR  ____  MAY NOT OCCUR  ____
POLYMERIZATION  WILL NOT OCCUR  X  ____

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
The manufacturer of the respirable crystalline silica states: Use dustless methods (vacuum) and place
into closable container for disposal, or flush with water. Do not dry sweep. Wear protective
equipment as needed.

WASTE DISPOSAL METHOD
Dispose of in accordance with Federal, state and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)
None required for product as is and under normal use conditions. If Sparcreme is allowed to dry
on a surface, then respiratory equipment designed to remove particles in the range of 10 microns
is recommended.

VENTILATION: Good general ventilation should be sufficient for most conditions. Local exhaust
ventilation may be necessary for some operations.

PROTECTIVE GLOVES (SPECIFY TYPE)
Acid resistant gloves

EYE PROTECTION (SPECIFY TYPE)
Goggles or face shield

OTHER PROTECTIVE EQUIPMENT - Under certain conditions acid resistant aprons and boots are suggested.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
None

OTHER PRECAUTIONS
None

Spartan Chemical Co., Inc.
SPARCROME (NEW & IMPROVED)
Ref: 29 CFR 1910:1200 (OSHA)

NAME  Thomas J. Mitchell
TITLE  Director of Research
DATE  June 1, 1989
SUPERCEDES  June 9, 1989

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