Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Cat#: 25090
Part Name: POLYCAPROLACTONE POWDERED
Supplier: Polysciences, Inc.
400 Valley Road
Warrington, PA 18976 USA
MSDS Telephone #215-343-6484 Emergency only #215-378-4526

Section 2: Hazards Identification

Hazard Overview
Dust is an OSHA nuisance dust. PEL is 15 mg/cu m. total dust and 5 mg/cu.m. respirable fraction. May cause skin, eye and respiratory tract irritation. Powdered material may form explosive dust-air mixtures.

GHS Classification
Acute Toxicity Inhalation Category 5
Skin Irritant Cat 2, Acute Inhalation Cat 4, Eye Irritation Cat 2B

Signal word: Warning

Hazard and Precautionary Statements

H2 DUST HAZARD
H302 Harmful if swallowed.
H303 + H313 May be harmful if swallowed, in contact with skin or if inhaled
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P280A Wear protective gloves
P285 In case of inadequate ventilation wear respiratory protection.
P301A IF SWALLOWED do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305B IF IN EYES, Separate eyelids with finger tips.
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P351 Rinse cautiously with water for several minutes.
P501 Dispose of contents/container to proper waste area in accordance with institutional practices and local, state or federal regulations.

NFPA Rating
Hazard Ratings:
These ratings are Polysciences’ Inc. own assements of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health Flammability Reactivity
1 1 0

Section 3: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Name</th>
<th>EINECS</th>
<th>CAS#</th>
<th>% in product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2-Oxepanone, homopolymer</td>
<td>Unknown</td>
<td>0024980414</td>
<td>95-100</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

Flush eyes with flowing water for at least 15 minutes.
If breathing is difficult, contact emergency personnel.
Remove to fresh air.
Separate eyelids with finger tips.
Wash skin with deluge of water for at least 15 minutes.
Section 5: Fire Fighting Measures
Flash point, deg F.: 527F  
Method: no data
UEL: no data  
LEL: no data  
Autoignition temperature, deg. F.: no data
Flammability Classification: no data  
Flame Propagation Rate: no data
Hazardous Combustion Products: Oxides of carbon, caprolactone monomer

Section 6: Accidental Release Measures
Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Prevent contact with combustible materials.
Remove ignition sources.
Sweep up solids.
Use appropriate personal protective equipment.
Ventilate the area.

Section 7: Handling and Storage
Keep away from heat, sparks, and flame.
Store at room temp
Store in a dry area.
Store in a tightly closed container.

Section 8: Exposure Controls/ Personal Protection

OSHA (ACGIH) Exposure Limits

<table>
<thead>
<tr>
<th>CAS#: 0024980414</th>
<th>TWA</th>
<th>STEL</th>
<th>CEILING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ppm</td>
<td>mg/</td>
<td>ppm</td>
</tr>
<tr>
<td>OSHA</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>ACGIH</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

Use chemical splash goggles and face shield.
Use latex or equivalent gloves.
Use process enclosures, local exhaust ventilation, or other engineering controls.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product.

Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product. Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Formula:</th>
<th>(C6H10O2)x</th>
<th>vapor pressure: no data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula Weight:</td>
<td>no data</td>
<td>vapor density: no data</td>
</tr>
<tr>
<td>boiling point:</td>
<td>no data</td>
<td>Specific gravity: 1.10</td>
</tr>
<tr>
<td>melting point:</td>
<td>136-140F</td>
<td>ph: no data</td>
</tr>
<tr>
<td>solubility:</td>
<td>Insoluble</td>
<td>appearance: white odorless powder</td>
</tr>
</tbody>
</table>

Section 10: Stability and Reactivity

Chemical Stability: stable
Conditions to Avoid: Moisture, excessive temps
Incompatibility with other materials: Acids, alkalis
Hazardous Decomposition Products: none
Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data
Subchronic data: no data

Section 12: Ecological Information

no data
Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Waste Code</th>
<th>Regulated Name</th>
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<tbody>
<tr>
<td>0024980414</td>
<td>not listed</td>
<td>not listed</td>
</tr>
</tbody>
</table>

Section 14: Transportation Data

Proper Shipping Name NOT REGULATED

Chemical Name

UN

Class

PG

Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

State Regulatory Information: If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0024980414</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

Section 16: Other Information

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END OF MSDS