1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Zinc Sulfate, ACS

Synonyms/Generic Names: None

Product Number: 6125

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect, Harmful by ingestion, Irritant

Target Organs: Kidneys, Pancreas, Liver, Lungs

Signal Word: Danger

Pictograms:

GHS Classification:

<table>
<thead>
<tr>
<th>Acute toxicity, Oral</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage</td>
<td>Category 1</td>
</tr>
<tr>
<td>Acute aquatic toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

GHS Label Elements, including precautionary statements:

Hazard Statements:

<table>
<thead>
<tr>
<th>Hazard Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>
Precautionary Statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>P273</td>
<td>Avoid release to the environment.</td>
</tr>
<tr>
<td>P280</td>
<td>Wear protective gloves/ eye protection/ face protection.</td>
</tr>
<tr>
<td>P305+P351+P338</td>
<td>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td>P501</td>
<td>Dispose of contents/ container to an approved waste disposal plant.</td>
</tr>
</tbody>
</table>

Potential Health Effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Causes eye irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. Causes respiratory tract irritation.</td>
</tr>
<tr>
<td>Skin</td>
<td>Harmful if absorbed through skin. Causes skin irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

NFPA Ratings

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
<tr>
<td>Specific hazard</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

HMIS Ratings

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Fire</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
<tr>
<td>Personal</td>
<td>E</td>
</tr>
</tbody>
</table>

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight %</th>
<th>CAS #</th>
<th>EINECS# / ELINCS#</th>
<th>Formula</th>
<th>Molecular Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc Sulfate, Heptahydrate</td>
<td>100</td>
<td>7446-20-0</td>
<td>231-793-3</td>
<td>ZnSO₄ · 7H₂O</td>
<td>287.56 g/mol</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

<table>
<thead>
<tr>
<th>Effect</th>
<th>First Aid Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>In case of eye contact, rinse with plenty of water and seek medical attention.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.</td>
</tr>
<tr>
<td>Skin</td>
<td>Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.</td>
</tr>
</tbody>
</table>

5. FIRE-FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Suitable (and unsuitable) extinguishing media</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product is not flammable. Use appropriate media for adjacent fire. Cool unopened containers with water.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special protective equipment and precautions for firefighters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specific hazards arising from the chemical</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emits toxic fumes (sulfur oxides, zinc/zinc oxides) under fire conditions. (See also Stability and Reactivity section).</td>
<td></td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th>Personal precautions, protective equipment and emergency procedures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>See section 8 for recommendations on the use of personal protective equipment.</td>
<td></td>
</tr>
</tbody>
</table>
Environmental precautions
Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

Methods and materials for containment and cleaning up
Sweep up and place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Hygroscopic. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Wear chemical safety glasses or goggles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.</td>
</tr>
<tr>
<td>Skin</td>
<td>Wear nitrile or rubber gloves, apron or lab coat.</td>
</tr>
<tr>
<td>Other</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state, color, etc.)</td>
<td>White crystals with lumps.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH</td>
<td>4.0 - 6.0 at 50 g/l at 20°C (68°F)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not Flammable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Flammable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limit</td>
<td>Not Explosive</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not Available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not Available</td>
</tr>
<tr>
<td>Density</td>
<td>1.957 g/cm3 at 20°C (68°F)</td>
</tr>
<tr>
<td>Solubility (ies)</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not Available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not Available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not Available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Chemical Stability</th>
<th>Stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possibility of Hazardous Reactions</td>
<td>Will not occur.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Not Available</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Strong oxidizing agents.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Sulfur oxides, zinc/zinc oxides.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

<table>
<thead>
<tr>
<th>Skin</th>
<th>Not Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Not Available</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Not Available</td>
</tr>
<tr>
<td>Ingestion</td>
<td>LD50 Oral - rat - 2,150 mg/kg</td>
</tr>
<tr>
<td>Other</td>
<td>LD50 Intraperitoneal - rat - 200 mg/kg</td>
</tr>
</tbody>
</table>

Carcinogenicity

<table>
<thead>
<tr>
<th>IARC</th>
<th>No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.</td>
</tr>
<tr>
<td>NTP</td>
<td>No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.</td>
</tr>
<tr>
<td>OSHA</td>
<td>No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.</td>
</tr>
</tbody>
</table>

Signs & Symptoms of Exposure

<table>
<thead>
<tr>
<th>Skin</th>
<th>Irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Irritation, redness, watering eyes.</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Irritation, coughing. Exposure to high levels can cause metallic taste, marked thirst, coughing, fatigue, weakness, muscular pain followed by fever and chills.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Irritation, nausea, vomiting, diarrhea.</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Aquatic Vertebrate</th>
<th>Toxicity to fish mortality LC50 - other fish - 1 - 10 mg/l - 96.0 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Invertebrate</td>
<td>Not Available</td>
</tr>
<tr>
<td>Terrestrial</td>
<td>Not Available</td>
</tr>
<tr>
<td>Persistence and Degradability</td>
<td>Not Available</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Bioaccumulative Potential</td>
<td>Not Available</td>
</tr>
<tr>
<td>Mobility in Soil</td>
<td>Not Available</td>
</tr>
<tr>
<td>PBT and vPvB Assessment</td>
<td>Not Available</td>
</tr>
<tr>
<td>Other Adverse Effects</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

### 13. DISPOSAL CONSIDERATIONS

<table>
<thead>
<tr>
<th>Waste Residues</th>
<th>Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Containers</td>
<td>Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.</td>
</tr>
</tbody>
</table>

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

### 14. TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>US DOT</th>
<th>Not Dangerous Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>Not Dangerous Goods</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not Dangerous Goods</td>
</tr>
<tr>
<td>Marine Pollutant</td>
<td>no</td>
</tr>
<tr>
<td>IATA/ICAO</td>
<td>Not Dangerous Goods</td>
</tr>
</tbody>
</table>

### 15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>TSCA Inventory Status</th>
<th>All ingredients are listed on the TSCA inventory.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSCL (EEC)</td>
<td>All ingredients are listed on the DSCL inventory.</td>
</tr>
<tr>
<td>California Proposition 65</td>
<td>Not Listed</td>
</tr>
<tr>
<td>SARA 302</td>
<td>Not Listed</td>
</tr>
<tr>
<td>SARA 304</td>
<td>Not Listed</td>
</tr>
<tr>
<td>SARA 311</td>
<td>Zinc Sulfate</td>
</tr>
<tr>
<td>SARA 312</td>
<td>Zinc Sulfate</td>
</tr>
<tr>
<td>SARA 313</td>
<td>Listed: Zinc Sulfate</td>
</tr>
<tr>
<td>WHMIS Canada</td>
<td>Class D−2B: Material causing other toxic effects (TOXIC).</td>
</tr>
</tbody>
</table>
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision 1</td>
<td>11-02-2012</td>
</tr>
</tbody>
</table>

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