Material Safety Data Sheet
Zinc sulfate, heptahydrate, ACS

Section 1 - Chemical Product and Company Identification

MSDS Name:
Zinc sulfate, heptahydrate, ACS
Catalog Numbers:
Q02272
Synonyms:
White vitriol; zinc vitriol.
Company Identification:
Qorpak
1195 Washington Pike
Bridgeville, PA 15017
Company Phone Number:
(412) 257-3100
Emergency Phone Number:
(800) 424-9300
CHEMTREC Phone Number:
(800) 424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7446-20-0</td>
<td>Zinc sulfate, heptahydrate</td>
<td>100%</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

**Appearance:** White crystals  
**Warning:** Causes severe eye irritation and possible eye injury. Causes skin and respiratory tract irritation. May be harmful if swallowed. Very toxic to aquatic organisms.
**Target Organs:** Respiratory system, eyes, skin.

Potential Health Effects

**Eye:**  
Contact may cause severe eye irritation and possible eye damage.

**Skin:**  
Causes skin irritation.

**Ingestion:**  
May cause irritation of the digestive tract. May be harmful if swallowed.

**Inhalation:**  
Dust is irritating to the respiratory tract. May be harmful if inhaled.

**Chronic:**  
No information found.
Section 4 - First Aid Measures

Eyes:  
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

Skin:  
Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid.

Ingestion:  
Do not induce vomiting. Get medical aid at once.

Inhalation:  
Give artificial respiration if necessary. Move victim to fresh air. Keep victim warm and at rest. Get medical aid at once.

Notes to Physician:  
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:  
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media:  
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:  
No information found.

Flash Point:  
No information found.

NFPA Rating:  
Health-2; flammability-0; reactivity-0

Explosion Limits:  
Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures

General Information:  
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:  
Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. This material is a water pollutant and should not be emptied into drains.

Section 7 - Handling and Storage
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Handling:
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.

Storage:
Store tightly closed at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc sulfate, heptahydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
Zinc sulfate, heptahydrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:
Do not wear contact lenses when working with chemicals. Wear appropriate protective eyeglasses or chemical safety goggles as described in 29 CFR 1910.133.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 and ANSI Z88.2. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Crystals</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>pH</td>
<td>4.4-6 (5% aq soln)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Negligible</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>100°C</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>&gt; 500°C</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>3.54 g/cm3 @ 25°C</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>ZnSO4.7H2O</td>
</tr>
</tbody>
</table>
Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures. Efflorescent (tending to lose water molecules of hydration) in dry air.

Conditions to Avoid:
High temperatures.

Incompatibilities with Other Materials:
Strong bases.

Hazardous Decomposition Products:
Oxides of sulfur, toxic fumes of zinc oxide.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 7446-20-0: ZH5300000

LD50/LC50:
CAS# 7446-20-0:
   Oral, mouse: LD50 = 200 mg/kg;
   Oral, rat: LD50 = 1260 mg/kg

Carcinogenicity:
CAS# 7446-20-0: Not listed by ACGIH, IARC, NTP, or CA Proposition 65.

Epidemiology:
No information available.

Teratogenicity:
No information available.

Reproductive:
No information available.

Mutagenicity:
No information available.

Neurotoxicity:
No information available.

Section 12 - Ecological Information

Ecotoxicity:
No information available.

Environmental:
Very toxic to aquatic organisms.
Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated.
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 7446-20-0 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).
SARA Reportable Quantities (RQ):
None.
CERCLA/SARA Section 313:
This material contains Zinc sulfate, heptahydrate (listed as Zinc compounds), 99%. (CAS# 7446-20-0) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
OSHA - Highly Hazardous:
Not considered highly hazardous by OSHA.

US State
State Right to Know:
CAS# 7446-20-0 can be found on the following state right to know lists: California, (listed as Zinc compounds), Pennsylvania, (listed as Zinc compounds).
California Regulations:
Not listed.

European/International Regulations
Canadian DSL/NDSL:
CAS# 7446-20-0 is listed on Canada’s DSL List.
Canada Ingredient Disclosure List:
CAS# 7446-20-0 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: October 11, 2006
Revision Date: None
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