### 1. CORRECTIVE RESPONSE ACTIONS
- Dilute and disperse
- Stop discharge

### 2. CHEMICAL DESIGNATIONS
- **2.1** CG Compatibility Group: Not listed.
- **2.2** Formula: ZnSO4·7H2O
- **2.3** IMO/UN Designation: Not listed
- **2.4** DOT ID No.: 916
- **2.5** CAS Registry No.: 7753-92-0
- **2.6** NAERG Guide No.: 171
- **2.7** Standard Industrial Trade Classification: 52349

### 3. HEALTH HAZARDS
#### 3.1 Personal Protective Equipment
- Dust mask, goggles or face shield; protective gloves

#### 3.2 Symptoms Following Exposure
- Inhalation: move to fresh air. INGESTION: induce vomiting, followed by prompt and complete gastric lavage, cathartics, and demulcents. EYES or SKIN: flush with water, sedative.

#### 3.3 Treatment of Exposure
- Inhalation: move to fresh air. INGESTION: induce vomiting, followed by prompt and complete gastric lavage, cathartics, and demulcents. EYES or SKIN: flush with water, sedative.

#### 3.4 TLV-TWA
- Not listed.

#### 3.5 TLV-STEL
- Not listed.

#### 3.6 TLV-Ceiling
- Not listed.

#### 3.7 Toxicity by Ingestion
- Grade 2: LD50 = 0.5-5 mg/kg

#### 3.8 Toxicity by Inhalation
- Currently not available.

#### 3.9 Chronic Toxicity
- Currently not available.

#### 3.10 Vapor (Gas) Irritant Characteristics
- Currently not available

#### 3.11 Liquid or Solid Characteristics
- Currently not available.

#### 3.12 Odor Threshold
- Currently not available.

#### 3.13 IDLH Value
- Not listed.

#### 3.14 OSHA PEL-TWA
- Not listed.

#### 3.15 OSHA PEL-STEL
- Not listed.

#### 3.16 OSHA PEL-Ceiling
- Not listed.

#### 3.17 EPA AELG
- Not listed.

### 4. FIRE HAZARDS
#### 4.1 Flash Point
- Not flammable.

#### 4.2 Flammable Limits in Air
- Not flammable.

#### 4.3 Fire Extinguishing Agents
- Not pertinent.

#### 4.4 Fire Extinguishing Agents Not to Be Used
- Not pertinent.

#### 4.5 Special Hazards of Combustion
- Products: Not pertinent.

#### 4.6 Behavior in Fire
- Currently not available.

#### 4.7 Auto-Ignition Temperature
- Not pertinent.

#### 4.8 Electrical Hazards
- Not pertinent.

#### 4.9 Burning Rate
- Not pertinent.

#### 4.10 Abundant Flame Temperature
- Currently not available.

#### 4.11 Stoichiometric Air to Fuel Ratio
- Not pertinent.

#### 4.12 Flame Temperature
- Currently not available.

#### 4.13 Combustion Molar Ratio (Reactant to Product)
- Not pertinent.

#### 4.14 Minimum Oxygen Concentration for Combustion
- MOCC: Not listed.

### 5. CHEMICAL REACTIVITY
#### 5.1 Reactivity with Water
- No reaction.

#### 5.2 Reactivity with Common Materials
- Currently not available.

#### 5.3 Stability During Transport
- Stable.

#### 5.4 Neutralizing Agents for Acids and Caustics
- Not pertinent.

#### 5.5 Polymerization
- Not pertinent.

#### 5.6 Inhibitor of Polymerization
- Not pertinent.

### 6. WATER POLLUTION
#### 6.1 Aquatic Toxicity
- 0.3 mg/l as Zn/120 hr/stickleback/lethal

#### 6.2 Waterfowl Toxicity
- Currently not available.

#### 6.3 Biological Oxygen Demand (BOD): None

#### 6.4 Food Chain Concentration Potential
- zinc is accumulated by some organisms but is not considered to be bioconcentrative.

#### 6.5 GESAMP Hazard Profile
- Not listed.

### 7. SHIPPING INFORMATION
#### 7.1 Grades of Purity
- Reagent; Technical.

#### 7.2 Storage Temperature
- Ambient.

#### 7.3 Inert Atmosphere
- No requirement.

#### 7.4 Venting
- Open.

#### 7.5 IMO Pollution Category
- Currently not available.

#### 7.6 Ship Type
- Currently not available.

#### 7.7 Barge Hull Type
- Currently not available.

### 8. HAZARD CLASSIFICATIONS
#### 8.1 49 CFR Category
- Not listed.

#### 8.2 49 CFR subclass
- Not pertinent.

#### 8.3 49 CFR Package Group
- Not listed.

#### 8.4 Marine Pollutant
- No.

#### 8.5 NFPA Hazard Classification
- Not listed.

#### 8.6 EPA Reportable Quantity
- 1000 pounds.

#### 8.7 EPA Pollution Category
- C.

#### 8.8 RCRA Waste Number
- Not listed.

#### 8.9 EPA FWPCA List
- Yes.

### 9. PHYSICAL & CHEMICAL PROPERTIES
#### 9.1 Physical State at 15°C and 1 atm
- Solid.

#### 9.2 Molecular Weight
- 161.95.

#### 9.3 Boiling Point
- Not pertinent.

#### 9.4 Freezing Point
- 91°F (32.7°C).

#### 9.5 Critical Temperature
- Not pertinent.

#### 9.6 Critical Pressure
- Not pertinent.

#### 9.7 Specific Gravity
- 1.96 at 20°C.

#### 9.8 Liquid Surface Tension
- Not pertinent.

#### 9.9 Liquid Water Interfacial Tension
- Not pertinent.

#### 9.10 Vapor (Gas) Specific Gravity
- Not pertinent.

#### 9.11 Ratio of Specific Heats of Vapor (Gas)
- Not pertinent.

#### 9.12 Latent Heat of Vaporization
- Not pertinent.

#### 9.13 Heat of Combustion
- Not pertinent.

#### 9.14 Heat of Decomposition
- Not pertinent.

#### 9.15 Heat of Solution
- Not pertinent.

#### 9.16 Heat of Polymerization
- Not pertinent.

#### 9.17 Heat of Fusion
- Currently not available.

#### 9.18 Limiting Value
- Currently not available.

#### 9.19 Reid Vapor Pressure
- Currently not available.

### NOTES

**ZINC SULFATE**

**Zsf**
### 9.20 Saturated Liquid Density

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>OT</td>
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<tr>
<td>P</td>
<td>ETR</td>
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<tr>
<td>E</td>
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</table>

### 9.21 Liquid Heat Capacity

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
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<tbody>
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<td>N</td>
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### 9.22 Liquid Thermal Conductivity

<table>
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<th>Temperature (degrees F)</th>
<th>British thermal unit inch per hour-square foot-F</th>
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### 9.23 Liquid Viscosity

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### 9.24 Solubility in Water

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