DIETHYLZINC

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge.

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.
2.2 Formula: (CH3)2Zn
2.3 IMO/UN Designation: 4.2/1366
2.4 DOT No.: 1366
2.5 CAS Registry No.: Currently not available
2.6 NERG Guide No.: 135
2.7 Standard Industrial Trade Classification: 51550

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Cartridge-type or fresh air mask for fumes or smoke; PVC fire-retardant or asbestos gloves; full face shield, safety glasses, or goggles; fire retardant coversall as standard wear; for special cases, use asbestos coat or rain suit.
3.2 Symptoms Following Exposure: Inhaling mist or vapor causes immediate irritation of nose and throat; excessive or prolonged inhalation of fumes from ignition or decomposition may cause "metal fume fever" (sore throat, headache, fever, chills, nausea, vomiting, muscular aches, perspiration, constricting sensation in lungs, weakness, sometimes prostration); symptoms usually last 24-48 hrs., with complete recovery in 24-48 hrs. Eyes are immediately and severely irritated.
3.3 Treatment of Exposure: INHALATION: move victim to fresh air and call doctor immediately. Give mouth-to-mouth resuscitation if needed; keep victim warm and comfortable; oxygen should be given only by experienced person, and only on doctor's instructions. EYES: flush with large amounts of running water for at least 15 min., holding eyelids apart to insure thorough washing; get medical attention as soon as possible; do not use chemical neutralizers; and avoid site or oriments unless prescribed by doctor. SKIN: flush affected area with large amounts of water, do not use chemical neutralizers; get medical attention of irritation persists. INGESTION: do not induce vomiting; have victim drink large amounts of water or milk immediately; if vomiting occurs, give more fluids; get medical attention.
3.4 TLV/TWA: Not listed.
3.5 TLV-STEL: Not listed.
3.6 TLV-Ceiling: Not listed.
3.7 Toxicity by Ingestion: Not pertinent.
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: Not pertinent.
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 ACGH: Not listed

4. FIRE HAZARDS

4.1 Flash Point: Not pertinent (ignites spontaneously)
4.2 Flammable Limits in Air: Not pertinent
4.3 Fire Extinguishing Agents: Dry chemical, sodium carbonate, powder dry powders or powder dry powders
4.4 Fire Extinguishing Agents Not to Be Used: Water, foam, halogenated agents, carbon dioxide
4.5 Special Hazards of Combustion Products: Yields zinc oxide fumes when burning, can cause "metal fume fever" (see 6.2)
4.6 Behavior in Fire: Reacts spontaneously with air or oxygen, and violently with water, evolving flammable ethane gas. Contact with water applied to adjacent fires will intensify the fire.
4.7 Auto Ignition Temperature: Below 0°F
4.8 Electrical Hazards: Not pertinent
4.9 Burning Rate: Not pertinent
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichiometric Air to Fuel Ratio: 35.7 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 10.0 (calc.)
4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

5. CHEMICAL REACTIVITY

5.1 Reactivity with Water: Reacts violently to form flammable ethane gas
5.2 Reactivity with Common Materials: Will react with surface moisture, generating flammable ethane gas.
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: Not pertinent
6.2 Waterfowl Toxicity: Not pertinent
6.3 Biological Oxygen Demand (BOD): None
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile: Not listed

7. SHIPPING INFORMATION

7.1 Grades of Purity: 95-98% Also shipped as 15-25% by weight solutions in hydrocarbon solvents.
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: Heated with dry nitrogen gas
7.4 Venting: Safety relief
7.5 IMO Pollution Category: Currently not available
7.6 Ship Type: Currently not available
7.7 Barge Hut Type: Currently not available

8. HAZARD CLASSIFICATIONS

8.1 40 CFR Category: Spontaneously Combustible
8.2 49 CFR Class: 4.2
8.3 49 CFR Package Group: I
8.4 Marine Pollutant: No
8.5 NFPA Hazard Classification: Not pertinent
8.6 EPA Reportable Quantity: Not listed.
8.7 EPA Pollution Category: Not listed.
8.8 RCRA Waste Number: Not listed
8.9 EPA FWPCA List: Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical State at 15°C and 1 atm: Liquid
9.2 Molecular Weight: 135.5
9.3 Boiling Point at 1 atm: 255°F = 124°C = 297 K
9.4 Freezing Point: –18°F = –28°C = 245 K
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 1.207 at 20°C (liquid)
9.8 Liquid Surface Tension: (est.) 20 dynes/cm = 0.020 nnt/m at 20°C
9.9 Liquid Water Interface 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: 120 Btu/lb = 69 cal/g = 2.8 X 10^8 J/kg
9.13 Heat of Combustion: –11,700 Btu/lb = –6,495 cal/g = –272 X 10^6 J/kg
9.14 Heat of Combustion: 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

- Currently not available
- None
- Not pertinent
- Not listed
- Not available
- Not pertinent (ignites spontaneously)
- Spontaneously
- Instability (Yellow)............
- Flammability (Red)............
- Health Hazard (Blue)..........
- Special (White)...................
- None
- Combustible
- 0.020 nnt/m at 20°C
- 2.8 X 10^8 J/kg
<table>
<thead>
<tr>
<th><strong>Temperature (degrees F)</strong></th>
<th><strong>DIETHYLZINC</strong></th>
<th><strong>LIQUID HEAT CAPACITY</strong></th>
<th><strong>LIQUID THERMAL CONDUCTIVITY</strong></th>
<th><strong>LIQUID VISCOSITY</strong></th>
<th><strong>Solubility in Water</strong></th>
<th><strong>Saturated Vapor Pressure</strong></th>
<th><strong>Saturated Vapor Density</strong></th>
<th><strong>Ideal Gas Heat Capacity</strong></th>
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**Additional Information**

- **Saturated Liquid Density**
- **Liquid Heat Capacity**
- **Liquid Thermal Conductivity**
- **Liquid Viscosity**
- **Solubility in Water**
- **Saturated Vapor Pressure**
- **Saturated Vapor Density**
- **Ideal Gas Heat Capacity**

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**JUNE 1999**