3. HAZARDS IDENTIFICATION

Pyrophoric liquid, decomposes violently in water. Skin contact can cause severe burns. Fumes may cause Zinc Fume Fever (ZnFF) and a hypothermic reaction. Fumes may cause skin and eye irritation. Avoid inhalation of fumes.

4. FIRST AID MEASURES

Prompt medical attention is required in all cases of exposure to Diethylzinc and its by-products. Rescue personnel should be equipped with appropriate protective equipment (e.g. Self-contained breathing apparatus) to prevent unnecessary exposure and must be aware of the fire and explosion potential of Diethylzinc.

Skin
Contact may cause severe burns. Fumes may cause irritation. Immediately flush affected areas with large quantities of water. Remove affected clothing as rapidly as possible only if not stuck to skin.

Eyes
Contact may cause severe burns. Fumes may cause irritation. Persons with potential exposure to Diethylzinc should not wear contact lenses. Flush contaminated eyes with large quantities of water for at least 15 minutes. Hold eyelids open to ensure complete flushing.

Inhalation
May cause ZnFF. Move exposed personnel to an uncontaminated area quickly using self-contained breathing apparatus. If breathing is difficult, give oxygen. If breathing has stopped, apply artificial respiration. Medical assistance should be sought immediately. Keep victim warm and quiet.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Always use dry powder, soda ash or lime. Never use water, foam or halogenated compounds to fight fires involving organometallic materials. Without risk, stop flow of this compound to the fire. Without risk, and if safe to do so, move container(s) away from fire area.

Exposure Hazards
In a controlled fire any unreacted Diethylzinc may re-ignite when contact with air or water is renewed.

Special Protective Equipment for Fire-Fighters
Fire resistant clothing, self-contained breathing apparatus, face shield and safety goggles, safety shoes and fire resistant gloves.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Evacuate area. Use appropriate protective equipment. Purge equipment with inert gas before attempting repairs. Ensure adequate ventilation. If leak is in container call one of the emergency numbers as appropriate (See footer).

Environmental Precautions
Try to stop release if safe to do so. For fire-fighting measures see Section 5.

Clean up methods
Contact Epichem for specific advice.

7. HANDLING AND STORAGE

Handling
Valve outlet seals must remain in place unless container is secured and valve outlet piped to use point. Use a check valve or trap to prevent hazardous back flow into the container. Any equipment used for Diethylzinc service must be thoroughly cleaned and prepared to eliminate contamination and must be maintained in a leak-free state. All air and moisture in the system must be eliminated before use.

Storage
Protect containers from physical damage. Do not allow temperatures to exceed (125F)51C. Store away from flammable material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Controls
OSHA or ACGIH:
TLV(TWA)= 5 mg/m³ (zinc oxide fume)
TLV(STEL/CEIL)= 10 mg/m³ (zinc oxide fume)
PEL(TWA)= 5 mg/m³ (zinc oxide fume)

OES and MEL: None established.

Zinc oxide fume:
Long term exposure limit (8 hr TWA reference period) 5mg/m³
Short term exposure limit (15 minute reference period) 10mg/m³

Ensure adequate ventilation.

Personal Protection
Self-contained breathing apparatus, fire resistant gloves, face shield and safety goggles, safety shoes, fire-resistant garments. Safety shower and eyewash.
SAFETY NOTICE: In Order to provide our customers with the highest quality material and maintain our high standards of safety, the surface temperature of the bubbler will be monitored during the transportation of our products. We would like to monitor the surface temperature of the bubbler using a Temiplabel. Temiplabel is a temperature-monitoring strip ranging from 120F to 150F (49C to 66C) which will indicate the temperature during shipment. If the temperature monitor is changed, please notify an Epichem representative immediately and we will assist you in the proper measures to be taken. We ask for your cooperation in our efforts of quality assurance and safety. If you have any questions or comments, please contact an Epichem representative. We thank you for your cooperation. Your assistance is greatly appreciated.

9. PHYSICAL AND CHEMICAL PROPERTIES
Boiling Point: (244F)118C
Vapor Pressure: log10 P(mmHg) = 8.280- 2109/T(K)
Freezing Point: (-18F)-28C
Liquid Density: 1.206 g/ml @ 20C
Molecular Weight: 123.49 grams
Solubility in water: Reacts violently.
Appearance: Colorless liquid which is pyrophoric.

10. STABILITY AND REACTIVITY

Conditions to avoid
Reacts pyrophorically in air. Light sensitive. Do not heat.
Note: Diethylzinc is stable indefinitely in an inert atmosphere at room temperature.

Materials to avoid
Avoid water, air or other oxidizers.

Hazardous Decomposition Products
Zinc Oxide fumes, CO, CO2

11. TOXICOLOGICAL INFORMATION

Zinc Oxide dust formed when this compound is oxidized can cause ZnFF. Symptoms include dryness and irritation of the throat, cough, breathing difficulties, pain in muscles and joints, fever, nausea, fatigue and heavy perspiration. It appears to cause change in the blood proteins, leading to a hypothermic reaction.

Diethylzinc is not listed in the IARC, NTP or OSHA Subpart Z as a carcinogen or potential carcinogen.

Diethylzinc is listed on the TSCA inventory

12. ECOLOGICAL INFORMATION

This product does not contain any Class I or Class II ozone depleting chemicals.

13. DISPOSAL CONSIDERATIONS
Regional and National regulations should be followed during waste disposal. Contact an Epichem representative for disposal of container and any unused quantities.

14. TRANSPORT INFORMATION
UN No: 1366
CLASS: 4.2 (4.3)
PG I
ECCN#: EAR99
IMDG Code: 4230
Shipping Name: Diethylzinc

15. REGULATORY INFORMATION

Classification
Highly Flammable, Corrosive

Risk and Safety Phrases
R14: Reacts violently with water.
R17: Spontaneously flammable in air.
R34: Causes burns.
S16: Keep away from sources of ignition – No smoking.
S43a: In case of fire use dry powder or lime - Never use water.
S45: In case of accident or if you feel unwell seek medical advice immediately. (Show label where possible)

16. OTHER INFORMATION
Ensure operators understand the pyrophoric nature of the product. Before using this product, it is recommended that a risk assessment and safety study be carried out. Further information on the use of this product can be obtained from the Technical Product Manager at the nearest Epichem facility.

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