
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog number: 245

Product name: RE-FORM ZnF

General use: To prepare unbuffered zinc formalin.

Product description: White granules.

Manufacturer

Anatech Ltd.
1020 Harts Lake Road
Battle Creek, MI 49037
USA

Emergency contact information

Health:	Anatech Ltd.	800-262-8324	8 am - 5 pm ET, M-F
Transportation:	CHEMTREC	800-424-9300	24 hours

2. COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS #</u>	<u>Exposure limits</u>
Zinc sulfate	7733-02-0	Not established. TLV = 10 mg/m ³ as nuisance particulates

3. HAZARDS IDENTIFICATION

Emergency overview

White granules.

Irritant to eyes and skin. Not likely to pose inhalation threat under normal conditions of use. Inhalation of particles may irritate respiratory system.

Potential health effects

(Human health effects only; animal effects in Section 11: Toxicological Information.)

Primary route(s) of exposure: Eyes, skin and inhalation.

Inhalation: Inhalation of particles may irritate respiratory system.

Eye: Contact of granules with eyes may cause irritation.

Skin: Contact of granules with skin may cause irritation.

Ingestion: Large amounts can produce stomach cramps, nausea and vomiting.

Chronic effects: Repeated skin contact can cause swelling. Zinc is eliminated from the body fairly rapidly, minimizing long-term effects.

Signs and symptoms: Eyes may water and coughing may occur. Persons with pre-existing skin disorders or impaired respiratory functions may be more susceptible to the effects of zinc sulfate.

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air if coughing or difficulty in breathing is experienced. Consult a physician if symptoms persist or worsen. Administer oxygen or artificial respiration as needed.

Eye: Flush eyes for at least 15 minutes in an eyewash station. If symptoms persist after washing, consult a physician.

Skin: Remove contaminated clothing, including footwear; wash before reuse or discard. For minor exposure, wash affected area with water and mild soap, rinsing thoroughly; apply a good quality skin lotion. In cases of prolonged, repeated or extensive exposure, rinse affected area or entire body for at least 15 minutes. For severe conditions, consult a physician.

Ingestion: Call a poison control center immediately. If victim is conscious, have him/her drink several glasses of water to dilute the solution. Induce vomiting only upon the advice of a physician or poison control authority.

5. FIRE FIGHTING MEASURES

Flammable properties

Flash point: Not applicable.

Flammable limit: Not applicable.

Autoignition temperature: Not applicable.

Flammability classification: Not applicable.

Flame propagation: None.

Hazardous products of combustion: Oxides of sulfur and zinc.

Extinguishing media: ABC rated portable fire extinguishers should be used. Professional fire fighters may use water spray, dry chemical or carbon dioxide.

Fire fighting instructions: No special instructions required for small volumes sold. Large volumes may emit toxic oxides under fire conditions. Sealed chemical suits and self contained breathing apparatus are necessary for fighting fires involving substantial volumes of this product.

6. ACCIDENTAL RELEASE MEASURES

The product is sold only in small bottles. Wear protective gloves. Remove dry granules. Wash affected area with water.

7. HANDLING AND STORAGE

Handling: Wear protective gloves when handling the granules. Avoid contact with skin and eyes.

Storage: Store at room temperature.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls: Good general room ventilation is essential.

Personal protective equipment

Respiratory protection: Generally not needed, but a NIOSH-approved particle mask may be used if desired.

Skin protection: Use protective gloves when handling this product. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

Eye protection: Use splash-proof goggles. Do not use safety glasses. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White granules.

Odor: None.

Physical state: Solid.

pH: Not applicable.

Vapor pressure: Not applicable.

Vapor density: Not applicable.

Boiling point: Not applicable.

Freezing point: Not applicable.

Solubility in water: Complete.

Specific gravity: Not applicable.

10. STABILITY AND REACTIVITY

Chemical stability: Stable.

Conditions to avoid: None.

Incompatibility with other materials: Mixing with phosphate solutions leads to precipitation of the zinc.

Hazardous decomposition products: Oxides of sulfur and zinc.

Hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

Acute eye effects: 420 µg of zinc sulfate produced moderate irritation when administered into rabbit eyes.

Acute skin effects: None known.

Acute oral effects: OSHA considers chemicals to be toxic if their LD₅₀ is at or below 500 mg/kg. LD₅₀ is the dose killing 50% of the test animals in a given time (usually 4 hours). LD₅₀ was 2,150 mg/kg in rat.

Acute inhalation effects: None known.

Chronic effects/carcinogenicity: No evidence of carcinogenicity.

Teratology: None known.

Reproductive effects: None known.

Mutagenicity: None known.

12. ECOLOGICAL INFORMATION

No environmental information is known.

13. DISPOSAL CONSIDERATIONS

Small amounts may be flushed into the sewer with plenty of water with the approval of local waste water treatment facility. Proper waste disposal is the generator's responsibility.

Canadian disposal regulations generally parallel those in the United States.

14. TRANSPORTATION INFORMATION

DOT (ground and air) and IATA: Not regulated.

15. REGULATORY INFORMATION

OSHA (USA): Under the Hazard Communication Standard and the Laboratory Standard, this product is a hazardous material: it is an irritant. The OSHA Standards cited mandate that exposed workers receive proper training in the properties of this product, work practices involved with its handling and disposal, and interpretation of its MSDS.

FDA (USA): Re-Form ZnF is for in vitro diagnostic use as a general purpose reagent in histology.

EPA (USA): Re-Form ZnF is a reportable substance under SARA Title III.

16. OTHER INFORMATION

Label warnings: Store jars at room temperature, away from moisture. Discard if powder appears wet.

This Material Safety Data Sheet has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard. It conforms to the provisions of the American National Standards Institute (ANSI) Standard Z400.1 (Standard for the Preparation of Material Safety Data Sheets). Information contained herein was obtained from sources which Anatech Ltd. believes are reliable. It is the user's responsibility to determine suitability of the product for his/her own use, and to assure proper use and disposal of it to protect the safety and health of employees and the protection of the environment.