

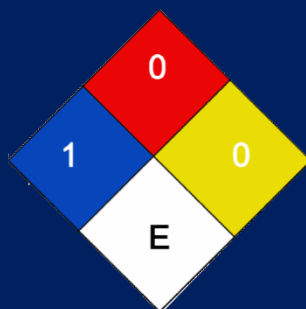


MATERIAL SAFETY DATA SHEET
ZIRCONIUM - METAL ORGANIC FRAMEWORK



1. IDENTIFICATION OF THE PRODUCT:

- Zirconium - Metal Organic Framework MOF-801-p



Health	1
Fire	0
Reactivity	0
Personal Protection	E

2. COMPOSITION & INFORMATION ON INGREDIENTS

- Chemical Characterization: $(Zr_6O_4(OH)_4(\text{fumarate})_6)$
- Hazardous Ingredients: Nil

3. HAZARD IDENTIFICATION Toxicity

- Toxicity: No Data Available
- Eye Contact: Dust may cause irritation.

4. FIRST AID MEASURES Skin

- Skin: Wash skin with soap and copious amounts of water
- Eyes: Immediate and prolonged irritation treat with copious amounts of water.
- Ingestion: Wash out mouth with water provided person Is Conscious.
- Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

5. FIREFIGHTING MEASURES

- Extinguishing Data: Water Spray
- Unsuitable Extinguishing Data: Carbon Dioxide, Dry Chemical Powder,
- Unusual Firefighting Hazards: Capable of creating a dust explosion.
- Special Firefighting Procedures: Use normal procedures which include Polymer Foam wearing self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions: Wear respirator, chemical safety goggles, rubber boots and gloves.
- Precautions to the Environment: Sweep up, place in a bag and hold for waste disposal.
- Cleanup Procedures: void raising dust. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

- Handling Precautions: Chemical Safety Goggles. Compatible with Chemical-resistant Gloves
- Storage: Store in a cool dry place
- Unusable Packaging Materials: Wash thoroughly after handling. Irritating dust, Keep tightly closed

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- **Exposure Controls**
 - Personal Protective Equipment
 - ◆ Respiratory: Self-contained breathing apparatus
 - ◆ Hand: Chemical-resistant Gloves
 - ◆ Eye: Avoid contact with eyes
 - ◆ Skin: Wash thoroughly after handling

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance
 - Form: powder
 - Color: white
 - Odor: No Odor
- Safety Related Information
 - Flashpoint: N/A
 - Boiling Point: N/A
 - Melting Point: N/A
 - pH: N/A

10. STABILITY AND REACTIVITY

- Stability: Completely Stable
- Reactivity: Non-Reactive/ Non-Soluble

11. TOXICOLOGICAL INFORMATION

- Possible Health Effects
 - Skin: No effect
 - Eyes: Irritation
 - Inhalation: No Chocking Hazard
 - Toxicity: Non-Toxic

12. ECOLOGICAL IMPACT

- Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.
- No Negative Ecological Impact, Data not Available

13. WASTE DISPOSAL

- Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator, equipped with an afterburner and scrubber.

14. TRANSPORT INFORMATION (UN ORNEK OLARAK VERİLMİŞTİR)

- HS Code: 28256020
- CAS: 7440-67-7
- Proper Shipping Name: Zirconium (MOF-801-p)
- Air Transport (ICAO & IATA): Quantum Dots
- Class: Non-Hazardous
- Packing group: Normal Packing
- Transport information: Not regulated for IATA (AIR)

15. OTHER REGULATORY INFORMATION

- Federal and State Regulations: TSCA 8(b) inventory: Zirconium (MOF-801)
- Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.
- Other Classifications:
 - WHMIS (Canada): Not controlled under WHMIS (Canada)
 - DSCL (EEC): R36- Irritating to eyes S2- Keep out of the reach of children S46- If swallowed, seek medical advice immediately & show container or label
 - HMIS (U.S.A.): Health Hazard: 1 Fire Hazard: 0 Reactivity: 0 Personal Protection: E
 - National Fire Protection Association (U.S.A.): Health: 1 Flammability: 0 Reactivity: 0 Specific hazard:
 - Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

16. OTHER INFORMATION

- References: Not available
- Other Special Considerations: Not available