

# MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

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## SECTION 1 Product Identification

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**CHEMICAL NAME:** Zirconium powder  
**CAS #:** 7440-67-7  
**FORMULA:** Zr

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## SECTION 2 Composition and Information on Ingredients

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INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	7440-67-7	100	5mg/m3(as Zr)	no data

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## SECTION 3 Hazards Identification

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**EMERGENCY OVERVIEW:** Irritating to skin, eyes and respiratory tract. Inhalation hazard if dehydrated to a fine dust or fume.

**PRIMARY ROUTES OF EXPOSURE:** Ingestion, inhalation (of dust or fume)

**EYE CONTACT:** The dust (after dehydration or water slurry) causes mild to moderate irritation of the eyes.

**SKIN CONTACT:** The powder causes mild to moderate irritation of the skin.

**INHALATION:** Hazard associated with inhalation of dried fine dust or fume. Irritating to nasal cavity and respiratory tract.

**INGESTION:** Ingestion can cause irritation of the mouth, throat, and esophagus

**CHRONIC HEALTH EFFECTS:** Long term skin or inhalation exposure to powder may lead to an allergic reaction in some susceptible individuals.

**ACUTE HEALTH EFFECTS:** Irritating to skin, eyes and respiratory tract. Ingestion can lead to gastrointestinal effects, vomiting and nausea.

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## SECTION 4 First Aid Measures

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**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

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## SECTION 5                      Firefighting Measures

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**FLASH POINT:** not applicable

**AUTO IGNITION TEMPERATURE:** 68°F as dust

**EXPLOSION LIMITS:** unknown

**EXTINGUISHING MEDIUM:** Class D metal fire agent, dry salt or sand

**SPECIAL FIREFIGHTING PROCEDURES:** If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Zirconium oxide as an oxidation product.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** May spontaneously ignite on exposure to air, especially in the form of a dry fine dust.

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## SECTION 6                      Accidental Release Measures

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**SPILL AND LEAK PROCEDURES:** In the case of a spill, the fine powder should be covered with sodium carbonate or dolomite in order to reduce the formation of dust. Sweep up the mixture.

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## SECTION 7                      Handling and Storage

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**HANDLING AND STORAGE:** Store and handle the material under an inert atmosphere of nitrogen or argon.

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## SECTION 8                      Exposure Controls and Personal Protection

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**EYE PROTECTION:** Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.

**SKIN PROTECTION:** Chemical-resistant.

**VENTILATION:** If possible, handle the material in an efficient fume hood.

**RESPIRATOR:** If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

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## SECTION 9                      Physical and Chemical Properties

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**COLOR AND FORM:** -80 mesh

**MOLECULAR WEIGHT:** 91.22

**MELTING POINT (DEG. C.):** 68°F as dust

**BOILING POINT:** 3577

**VAPOR PRESSURE:** no data

**SPECIFIC GRAVITY:** 6.506

**SOLUBILITY IN WATER:** insoluble

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## SECTION 10                    Stability and Reactivity

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**STABILITY:** air sensitive

**HAZARDOUS POLYMERIZATION:** no hazardous polymerization

**CONDITIONS TO AVOID:** Contact of dried powder with air may result in auto ignition  
**INCOMPATIBILITY:** air, oxidizing agents, copper oxide, halogens, halocarbons, strong bases  
**DECOMPOSITION PRODUCTS:** none

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## **SECTION 11 Toxicological Information**

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**RTECS DATA:** No specific information available on this product.  
**MUTAGENIC EFFECTS:** no data  
**TETRATOGENIC EFFECTS:** no data  
**CARCINOGENIC EFFECTS:** no data  
To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

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## **SECTION 12 Ecological Information**

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**ECOLOGICAL INFORMATION:** No information available

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## **SECTION 13 Disposal Considerations**

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**DISPOSAL:** Dispose of in according to local state and federal regulations.

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## **SECTION 14 Transportation Information**

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Zirconium powder, dry, Class 4.2, UN2008, PG II

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## **SECTION 15 Regulatory Information**

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**TSCA:** Listed in the TSCA inventory  
**SARA (TITLE 313):** Title compound not listed

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## **SECTION 16 Other Information**

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**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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