



Hummel Croton Inc.
10 Harmich Rd.
South Plainfield, NJ 07080
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Phone: 908-754-1800
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In Case Of Emergency Call Chemtrec®
(U.S.) (800) 424-9300
(International) (703) 527-3887

Zirconium Powder Safety Data Sheet

1. Product and Company

Product name: Zirconium Metal Powder

Synonym: Zirconium Metal Powder, Wetted

CAS-No.: Zirconium – 7440-67-7

Company: Hummel Croton Inc.
10 Harmich Rd.
South Plainfield, NJ 07080

Telephone: 908-754-1800
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HMIS Rating	
Health	1
Flammability	3
Reactivity	1
Personal Protection	E

Emergency telephone number

Emergency Phone #: Chemtrec US: 800-424-9300
Chemtrec International: 703-527-3887

2. Hazards

GHS Label elements

GHS Classification: Self-heating – (Category 1), H251

Pictogram(s)



Signal word **DANGER**

Hazard statement(s)

H251 Self-heating: May catch fire.

Precautionary statement(s)

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
 P322 Specific measures (see supplemental first aid instructions on this label).
 P330 Rinse mouth.
 P363 Wash contaminated clothing before reuse.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS

Combustible Dust

3. Composition/Ingredients

Substance

Molecular weight: 91.22 g/mol
 CAS-No.: See Below

Material	CAS	%	OSHA	ACGIH
Zirconium	7440-67-7	70%	5 mg/m ³ as Zr	5 mg/m ³ as Zr
Water	7732-18-5	27-30%	Not Established	Not Established
Hafnium	7440-58-6	0-2.5%	0.5 mg/m ³ as Hf	0.5 mg/m ³ as Hf

4. First Aid

First Aid For Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

First Aid For Skin: In case of contact, flush skin with water. Wash clothing before reuse. Call a physician if irritation occurs.

First Aid For Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

First Aid For Ingestion: If swallowed, call a physician immediately.

5. Fire Data

Flammability: Non-Flammable
 Flash Point: Not Applicable

Auto Ignition: Not Applicable

Flammable Limits: Not Applicable

Extinguishing Media: Use approved Class D extinguisher or smother with dry sand, dry ground limestone or dry clay. DO NOT USE WATER. Do not use carbon dioxide extinguisher.

Fire Fighting Procedure: Do not apply water to burning material. Full emergency equipment with self-contained breathing apparatus must be worn by firefighters. Flammable solid.

Fire/Explosion Hazards: Flammable solid. Emits toxic fumes under fire conditions.

6. Accidental Release

Spill Or Leak Procedures: Utilize recommended protective clothing and equipment. Clean spills in a manner that does not disperse dust into the air. Spill area can be washed with water.

Collect wash water for approved disposal. Keep from entering water or ground water.

7. Handling And Storage

Storage Temperatures: Store at ambient temperature

Shelf Life: Unlimited in tightly closed container.

Special Sensitivity: None

Handling/Storage Precautions: Avoid breathing dust. Avoid getting in eyes or on skin. Wash thoroughly after handling. Store in a dry place away from direct sunlight, heat and incompatible materials. Reseal containers immediately after use. Store away from food and beverages.

Additional Information: Zirconium reacts with carbon tetrachloride, copper oxide, lead oxide, potassium chlorate and nitrate, borax, sulfates, tungstates, molybdates, alkali metal hydroxides, chromates, and dichromates. Its combustion in air is stimulated by the presence of limited amounts of water. Autoignition temperature of dust cloud is 68°F. It will burn in an atmosphere of carbon dioxide. Zirconium metal powder is packaged with 30% or more of water. Do not handle dry! Handle only under a minimum of 30% water or in protective argon atmosphere. Zirconium powder can autoignite in air when dry. It is extremely sensitive to shock, heat, friction and static electricity. Settled zirconium may form a hard cake, reslurry by rolling the shipping container on a ball-mill type roller for a minimum of 30 minutes. Do not attempt to remove zirconium if it has settled in the container. Friction can cause ignition if water content of the material is low. Routine inspection of product containers for possible leakage or drying is highly recommended.

8. Exposure Controls/Personal Protection

Eye Protection: Safety glasses or goggles.

Skin Protection: PVC gloves with impervious boots, apron or coveralls. Wash hands and face before eating, drinking or using tobacco.

Respirator: Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a NIOSH/MSHA approved dust respirator must be worn.

Ventilation: Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.

Additional Measures: Emergency showers and eye wash stations should be available. Educate and train employees in the safe handling of hazardous chemicals.

9. Physical And Chemical Properties

Physical Form: Amorphous Powder
Color: Bluish Black
Odor: Odorless
Molecular Weight: 91.22 g/mol
Boiling Point: 3577°C
Melting/Freezing Point: 1845°C
Solubility In Water: Insoluble
Specific Gravity: 6.49

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur.
Incompatibilities: Strong acids, strong oxidizing agents, hydrogen fluoride, phosphorous, oxygen, lead. Sensitive to air.
Instable Conditions: Excessive temperatures (see incompatibilities).
Decomposition Temperature: Not known.
Decomposition Products: Unknown.

11. Toxicological Information

RTECS Number: ZH7070000
Routes of Exposure: Eye contact. Ingestion. Inhalation. Skin contact.
Toxicity Data: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
Chronic Toxic Effects: This product has no known chronic effects. Repeated or prolonged exposure to this compound is not known to aggravate medical conditions.
Acute Toxic Effects: Irritating to the skin and eyes on contact. Inhalation will cause irritation to the lungs and mucus membranes. Irritation to the eyes will cause watering and redness. Reddening, scaling and itching are characteristics of skin inflammation. Follow safe industrial hygiene practices and always wear protective equipment when handling this compound.

12. Ecological Information

Ecotoxicity: Not available at this time.

13. Disposal Considerations

Waste Disposal Method: Waste disposal should be in accordance with existing federal, state and local environmental regulations.

14. Transportation Information

Proper Shipping Name: Zirconium Powder, Wetted with not less than 25% water.
UN Number: 1358
Class: 4.1
P.G.: II
Label Code: 4.1

15. Regulatory Information

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Chemical Inventory: This compound is on the EPA Toxic Substance Control Act (TSCA) Inventory List

California Proposition 65: To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects, or other reproductive effects.

SARA 313 Title III:

Section 320 Extremely Hazardous Substances: None

Section 311/312 Hazardous Categories: None

Section 313 Toxic Chemicals: None

16. Other Information

Prepared By: Michael Richard

Date: June 1, 2015

Reason For Issue: GHS Compliance

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