



Hummel Croton Inc.
10 Harmich Road
South Plainfield, NJ 07080

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MSDS



Zirconium Powder

*In case of Emergency Call Chemtrec ®
(U.S.) (800)-424-9300
(International) (703)-527-3887*

Section I. Chemical Product and Company Identification

Supplier:

Hummel Croton Inc.
10 Harmich Road
South Plainfield, NJ 07080
(908)-754-1800

HMIS Rating

Health 1

Flammability 3

Reactivity 1

Personal Protection E

Chemical Name: Zirconium Metal Powder

Synonym: Zirconium Metal Powder Wetted

CAS Number: 7440-67-7

Chemical Formula: Zr

Section II. Composition and Information on Ingredients

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

Section III Hazards Identification:

xxx

Section XVI. Other Information

Prepared By: Mark Dugan

Date: April 13, 2006

Reason For Issue: Updated Format

Accute Health Effects: Irritating to the skin and eyes on contact. Inhalation will cause irritation to the lungs and mucus membrane. 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.

Chronic Health Effects: This product has no known chronic effects. Repeated or prolong exposure to this compound is not known to aggravate medical conditions.

Accute Health Effects: This product is not listed by NTP, IARC or regulated as a Carcinogen by OSHA.

Section IV. First Aid Measures

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.

Section V. Fire and Explosion Data

Flammability: Non-Flamable

Flash Points: Not Applicable

Auto-Ignition: Not Applicable

Flammable Limits: Not Applicable

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

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. FLAMMABLE SOLID.

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

Section VI. Accidental Release Measures

Spill Or Leak Procedures: Shut off all sources of ignition. Utilize recommended protective clothing and equipment. Use nonsparking tools. Clean spills in a manner that does not disperse dust into the air. Sweep up, place in a bag and hold for waste disposal. Spill area can be washed with water. Collect wash water for approved disposal. Keep from entering water or ground water.

Section VII. 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 (see Section X). 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.

Section VIII. Exposure Controls/Personal Protection

Eye Protection: Safety glasses or goggles.

Skin Protection: PVC gloves with impervious boots, apron or coveralls. Employees should wash their hands and face before eating, drinking or using tobacco products.

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

Section IX. Physical and Chemical Properties

Physical Form: Amorphous Powder

Color: Bluish-Black

Odor: Odorless

Molecular Weight: 91.22

Boiling Point: 3577&3176C

Melting/Freezing Point: 1845°C

Solubility In Water: Insoluble

Specific Gravity: 6.49

Section X. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will Not occur

Incompatibilities: Strong Acids, Strong Oxidizing Agents, Hydrogen Fluoride, Phosphorus, Oxygen, Lead, and Sensitive To Air

Instable Conditions: Excessive temperatures (see Incompatibilities).

Decomposition Temperature: Unknown

Decomposition products: Unknown

Section XI. 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 membrane. 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.

Section XII. Ecological Information

Ecotoxicity: Not available at this time.

Section XIII. Disposal Considerations

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

Section XIV. 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

Section XV. 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 302 Extremely Hazardous Substances: None

Section 311/312 Hazardous Categories: None

Section 313 Toxic Chemicals: None

Section XVI. Other Information

Prepared By: Mark Dugan

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Reason For Issue: Updated Format

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