



**ISLAND
PYROCHEMICAL
INDUSTRIES**

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Material Safety Data Sheets Collections

Zirconium Powder, Wetted

SAFETY INFORMATION

Section 1-Product Identification

Chemical Name: Zirconium Powder, Wetted

Supplier: Island Pyrochemical Industries

Synonym: Zirconium Metal Powder

267 E. Jericho Tpke.

**Chemical
Formula:** Zr

Mineola, NY 11501

CAS Number: Zirconium: 7440-67-7
Water: 7732-18-5
Hafnium: 7440-58-6

**Emergency
Contact:** Chemtel: Domestic (800) 255-3924
International (813) 248-0585

Section 2-Composition/Information on Ingredients

Chemical Characterization (preparation):

Zr, Zirconium powder, et (at the lowest estimate 30% water)

Dangerous Constituents:

Zirconium powder

Content: 70%

Cas Number: 7440-67-7

EINECS-Number: 231-176-9

Section 3-Hazards Identification

Acute 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 prolonged exposure to this compound is not known to aggravate medical conditions.

Carcinogenicity: This product is not listed by NTP, IARC or regulated as a Carcinogen by OSHA

Section 4-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 5-Fire Fighting Measures

Extinguishing Media: Use extinguishing powder on the basis of NaCl or pulverized limestone or dry clay. DO NOT USE WATER. Do not use carbon dioxide extinguisher on this material

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

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

Additional Information: Combustible, self-igniting. Take precautionary measures against static discharge

Section 6-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 7-Handling and Storage

Storage Temperatures: Ambient

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. Auto ignition temperature of dust cloud is 68° F. It will burn in an atmosphere of carbon dioxide.

Zirconium metal powder is packaged with 50% ethanol. Do not handle dry! Handle only under a minimum of 50% ethanol or in protective argon atmosphere. Zirconium powders 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 8-Exposure Controls/Personal Protection

<i>Eye Protection:</i>	Safety glasses or goggles.
<i>Skin Protection:</i>	PVC gloves with impervious boots, apron or coveralls. Employees should wash their hands and face before eating, drinking or using tobacco products.
<i>Respirator:</i>	Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a NIOSH/MSHA approved dust respirator must be worn.
<i>Ventilation:</i>	Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.
<i>Additional Protective Measures:</i>	Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous chemicals.

Section 9-Physical and Chemical Properties

<i>Physical Form:</i>	Powder
<i>Color:</i>	Dark Gray
<i>Odor:</i>	Odorless powder, sulphurous odor may occur
<i>Boiling Point:</i>	3577°C
<i>Melting/freezing Point:</i>	1845°C
<i>Solubility In Water:</i>	Insoluble
<i>Ignition Temperature:</i>	170-250° C

Section 10-Stability and Reactivity

<i>Stability:</i>	Stable under ordinary conditions of use and storage.
<i>Incompatibilities:</i>	Strong Acids, Oxidizing Agents, Hydrogen Fluoride, Phosphorus, Sensitive To Air
<i>Instable Conditions:</i>	At higher temperature risk of self-ignition. Keep away from sources of ignition. Avoid friction sparks. Avoid formation of dust/air mixtures because of explosion hazard.
<i>Additional information:</i>	Risk of fire. Heat development. Very highly flammable and self-igniting under unfavorable conditions, burns white hot with formation of Zirconium Oxide and Zirconium Nitride. When mixed with oxidizing substances, explosion hazard. Burning zirconium decomposes water with formation of oxyhydrogen gas. Burning zirconium decomposes water instantaneously (explosion).

Section 11-Toxicological Information

<i>RTECS Number:</i>	Zirconium: ZH7070000 Ethanol: KQ6300000
<i>Routes of Exposure:</i>	Eye contact. Ingestion. Inhalation. Skin contact.
<i>Toxicity Data:</i>	To the best of our knowledge, the chemical, physical, and toxicological properties of Zirconium have not been thoroughly investigated. Ethanol Rat, oral LD50: 7060 mg/kg Rabbit oral LD50: 6300 mg/kg

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 mucous 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 12-Ecological Information

Ecotoxicity: Product is not biodegradable

Aquatic toxicity: Settles as sludge in waste water

Water risk Class: Mild water pollutant

General remarks: Do not allow to enter ground soil, sewage, or drains

Section 13-Disposal Considerations

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

Section 14-Transport Information

Proper Shipping Name: Zirconium Suspended in a Flammable Liquid

UN Number: 1358 *Class:* 4.1

P.G.: II *DOT Label:* Flammable Solid

Section 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 Title III: Section 302 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: None

SECTION 16-OTHER INFORMATION

HIMS Rating:

Health	1
Flammability	3
Reactivity	1
Personal Protection	E

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