

MATERIAL SAFETY DATA SHEET

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

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SECTION 1 Product Identification

CHEMICAL NAME: Hafnium crystal bar
CAS #: 7440-58-6
FORMULA: Hf
SYNONYM:

SECTION 2 Composition and Information on Ingredients

INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	7440-58-6	96	0.5mg/m ³ (as Hf)	0.5mg/m ³ (as Hf)
zirconium	7440067-7	4	5mg/m ³ (as Zr)	5mg/m ³ (as Zr)

SECTION 3 Hazards Identification

EMERGENCY OVERVIEW: Inhalation hazard as a fine dust or fume.
PRIMARY ROUTES OF EXPOSURE: Inhalation (of dust or fume)
EYE CONTACT: The dust may cause slight to mild irritation of the eyes.
SKIN CONTACT: The dust may cause slight to mild irritation of the skin.
INHALATION: Hazard associated with inhalation of fine dust or fume. May be irritating to nasal cavity and respiratory tract.
INGESTION: No specific information is available on the physiological effects of ingestion.
CHRONIC HEALTH EFFECTS: No information available on the effects of long-term exposure.
ACUTE HEALTH EFFECTS: Dust may be irritating to skin, eyes and respiratory tract.

SECTION 4 First Aid Measures

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.

SECTION 5 Firefighting Measures

FLASH POINT: not applicable

AUTO IGNITION TEMPERATURE: not applicable

EXPLOSION LIMITS: not applicable

EXTINGUISHING MEDIUM: None

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: none

UNUSUAL FIRE OR EXPLOSION HAZARDS: Potentially combustible as fine dust. Dust may form explosive mixtures with air under some conditions.

SECTION 6 Accidental Release Measures

SPILL AND LEAK PROCEDURES: Spills can simply be swept up.

SECTION 7 Handling and Storage

HANDLING AND STORAGE: Store material in a tightly sealed container in a cool dry place.

SECTION 8 Exposure Controls and Personal Protection

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.

SECTION 9 Physical and Chemical Properties

COLOR AND FORM: 5/8x1.5 pieces

MOLECULAR WEIGHT: 178.49

MELTING POINT (DEG. C.): not applicable

BOILING POINT: 460^o

VAPOR PRESSURE: no data

SPECIFIC GRAVITY: 13.31

SOLUBILITY IN WATER: insoluble

SECTION 10 Stability and Reactivity

STABILITY: air and moisture stable

HAZARDOUS POLYMERIZATION: no hazardous polymerization

CONDITIONS TO AVOID: Mixtures of fine dust with air in contact with an ignition source.

INCOMPATIBILITY: mineral acids.

DECOMPOSITION PRODUCTS: none

SECTION 11 Toxicological Information

RTECS DATA: No information available in the RTECS files.

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.

SECTION 12 Ecological Information

ECOLOGICAL INFORMATION: No information available

SECTION 13 Disposal Considerations

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

SECTION 14 Transportation Information

Non-hazardous

Non-hazardous

SECTION 15 Regulatory Information

TSCA: Listed in the TSCA inventory

SARA (TITLE 313): Title compound not listed

SECTION 16 Other Information

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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