

# SAFETY DATA SHEET

Version 8.3

Revision Date 2025/08/08

Print Date 2025/08/13

Date of first issue 2025/08/08

SDS No. Eternal-Element-ET-HfM-202501

Product Number Eternal-Element-ET-HfM-202501

## Hafnium

---

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1. PRODUCT AND COMPANY IDENTIFICATION

##### 1.1 Product identifiers

Product name : Hafnium

Product Number : ET-HfM-202501

Brand : Eternal-Element

CAS-No. : 7440-58-6

##### 1.2 Details of the supplier of the safety data sheet

Company : Shanghai Sheeny Metal Mateirals Co.,Ltd.

Room 210, Kedi Building,

No. 688 Huajiang Road, Jiading District,

SHANGHAI

201800 SHANGHAI

CHINA

上海斯年金属材料有限公司

上海市嘉定区华江公路688号凯迪大厦

210室

邮政编码 : 201800

Telephone : +86 16602150044  
Fax : +86 16602150044

##### 1.3 Emergency telephone

Emergency Phone # : +86 4006632276

#### 1.4 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

---

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

<b>Appearance</b>	: Turnings
Not a hazardous substance or mixture.	

### GHS Classification

Not a hazardous substance or mixture.

### GHS label elements

Not a hazardous substance or mixture.

### Physical and chemical hazards

Not classified based on available information.

### Health hazards

Not classified based on available information.

### Environmental hazards

Not classified based on available information.

### Other hazards which do not result in classification

None known.

---

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Hafnium	7440-58-6	>= 90 -<= 100
Zirconium	7440-67-7	>= 1 -< 10

---

## 4. FIRST AID MEASURES

If inhaled : After inhalation: fresh air.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact : After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed	: After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Most important symptoms and effects, both acute and delayed	: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Protection of first-aiders	: For personal protection see section 8.
Notes to physician	: No data available

---

## 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water Foam Carbon dioxide (CO <sub>2</sub> ) Dry powder
Unsuitable extinguishing media	: For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards during fire fighting	: Combustible.  Development of hazardous combustion gases or vapours possible in the event of fire.
Hazardous combustion products	: Zirconium oxides  Hafnium oxide
Hazardous combustion products	: Zirconium oxides  Hafnium oxide
Specific extinguishing methods	: Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters	: In the event of fire, wear self-contained breathing apparatus.

---

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Avoid inhalation of dusts.  
Ensure adequate ventilation.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:  
For personal protection see section 8.

Environmental precautions : Do not let product enter drains.

Methods and materials for containment and cleaning up : Cover drains. Collect, bind, and pump off spills.  
Observe possible material restrictions (see sections 7 and 10).  
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 7. HANDLING AND STORAGE

### Handling

For precautions see section 2.2.

Avoidance of contact : Bromine  
Chlorine  
Fluorine  
hydrochloric acid  
Halogenated hydrocarbon  
Carbon tetrachloride

### Storage

Further information on storage conditions : Tightly closed.  
Dry.

Storage class : 11, Combustible Solids

Recommended storage temperature : Recommended storage temperature see product label.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hafnium	7440-58-6	TWA	0.5 mg/m <sup>3</sup> (Hafnium)	ACGIH
Zirconium	7440-67-7	PC-TWA	5 mg/m <sup>3</sup> (Zirconium)	GBZ 2.1-2007

	PC-STEL	10 mg/m <sup>3</sup> (Zirconium)	GBZ 2.1- 2007
--	---------	-------------------------------------	------------------

**Engineering measures** : No data available

#### **Personal protective equipment**

Respiratory protection : required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Safety glasses

Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

---

#### **9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Turnings

Color : No data available

Odor : No data available

Odor Threshold  
pH : No data available

Melting point/ range : 2,227 °C  
Method: lit.

Boiling point/boiling range : 4,602 °C  
Method: lit.

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas)	:	No data available
Flammability (liquids)	:	No data available
Burning rate	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	13.3 g/cm <sup>3</sup> Method: lit.
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	350 - 450 °C
Decomposition tempera- ture	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Explosive properties	:	Not classified as explosive.
Oxidizing properties	:	none
Molecular weight	:	178.49 g/mol
Particle characteristics		
Particle size	:	No data available

---

## 10. STABILITY AND REACTIVITY

Reactivity : The following applies in general to flammable organic

substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: No data available
Conditions to avoid	: no information available
Incompatible materials	: Bromine Chlorine Fluorine hydrochloric acid Halogenated hydrocarbon Carbon tetrachloride
Hazardous decomposition products	: In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### **Acute toxicity**

Oral: No data available  
Inhalation: No data available  
Dermal: No data available

#### **Skin corrosion/irritation**

No data available

#### **Serious eye damage/eye irritation**

No data available

#### **Respiratory or skin sensitization**

No data available

#### **Germ cell mutagenicity**

No data available

#### **Carcinogenicity**

No data available

#### **Reproductive toxicity**

No data available

#### **Specific target organ toxicity - single exposure**

No data available

#### **Specific target organ toxicity - repeated exposure**

No data available

#### **Aspiration hazard**

No data available

## 11.2 Additional Information

RTECS: MG4600000

---

## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

No data available

### **Persistence and degradability**

#### **Components:**

##### **Hafnium:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

### **Bioaccumulative potential**

#### **Components:**

##### **Hafnium:**

Partition coefficient: n-octanol/water : Remarks: Not applicable for inorganic substances

##### **Zirconium:**

Partition coefficient: n-octanol/water : Remarks: Not applicable for inorganic substances

### **Mobility in soil**

No data available

### **Other adverse effects**

No data available

---

## 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.

---

## 14. TRANSPORT INFORMATION

### **International Regulations**

#### **IATA-DGR**

UN/ID No. : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable

Aldrich- 266809

Page 8 of 12

Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Packing instruction (cargo aircraft)	:	Not applicable
Packing instruction (passenger aircraft)	:	Not applicable

#### **IMDG-Code**

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
EmS Code	:	Not applicable
Marine pollutant	:	no

#### **Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC Code**

Not applicable for product as supplied.

#### **National Regulations**

##### **JT/T 617**

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Environmentally hazardous	:	no

#### **Special precautions for user**

Remarks	:	Not classified as dangerous in the meaning of transport regulations.
---------	---	--

---

## **15. REGULATORY INFORMATION**

#### **National regulatory information**

#### **Law on the Prevention and Control of Occupational Diseases**

#### **Regulations on Safety Management of Hazardous Chemicals**

Catalogue of Hazardous Chemicals	:
----------------------------------	---

Hazardous Chemicals for Priority Management under SAWS	:	Not applicable
--	---	----------------

Catalogue of Specially Controlled Hazardous Chemicals	:	Not listed
---	---	------------

List of Explosive Precursors	:	Listed
------------------------------	---	--------

**Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

China Severely Restricted Toxic Chemicals for Import and Export : Not applicable

**Measures on the Environmental Administration of New Chemical Substances Registration**

Registration/Notification number : B1A222212730

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

**Regulation on the Administration of Precursor Chemicals**

Catalogue and Classification of Precursor Chemicals : Not listed

**Regulations on the Administration of Controlled Chemicals**

List of Controlled Chemicals : Not listed

**Regulations of Ozone Depleting Substances Management**

List of Controlled Ozone Depleting Substances : Not listed

List of Controlled Ozone Depleting Substances Import and Export : Not listed

**Environmental Protection Law**

List of Priority Controlled Chemicals : Not listed

List of Key Controlled New Pollutants : Not listed

---

**16. OTHER INFORMATION**

Revision Date : 2025/08/08

**Further information**

Other information : The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Eternal-Element Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www. eternal-element.com](http://www. eternal-element.com) and/or the reverse side of

invoice or packing slip for additional terms and conditions of sale.

Copyright Shanghai Sheeny Metal Mateirals Co.,Ltd.  
License granted to make unlimited paper copies for internal use only.

Date format : yyyy/mm/dd

#### **Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
GBZ 2.1-2007 : Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA : 8-hour, time-weighted average  
GBZ 2.1-2007 / PC-TWA : Permissible concentration - time weighted average  
GBZ 2.1-2007 / PC-STEL : Permissible concentration - short term exposure limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the

Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative;  
WHMIS - Workplace Hazardous Materials Information System

### **Disclaimer**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [sales@eternal-element.com](mailto:sales@eternal-element.com).

CN / EN