

## GHS Safety Data Sheet

SDS No. : HFE01TAEG

Date Issued : 2020/04/02

### Section 1. Identification of the substance or mixture and of the supplier

#### Product Information

Product name: Hf Hafnium

Product number:	Purity	Form	Size or Shape
HFE02RB	99.9%(3N)	tablets	Zr ≤ 3%, φ10×t5 (mm)
HFE01CB	—	chips	10×10×t1 (mm)
HFE02CB	—	chips	5×5×t1 (mm)
HF001	3N	target	Zr ≤ 3%

#### Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.  
 1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284  
 Phone: +81-49-284-1511 Fax: +81-49-284-1351  
 Emergency Phone : +81-49-284-1511

**Recommended uses and restrictions on use:** For research purposes

### Section 2. Hazards identification

#### GHS Classification

Health Hazards	Environmental Hazards	Physical Hazards
Specific target organ toxicity, repeated exposure : Category2	No data available	Flammable solids : Not classified Pyrophoric solids : Not classified Self-heating substances and mixtures : Not classified Substances and mixtures which, in contact with water, emit flammable gases : Not classified

GHS Label: C



Pictograms or symbols:

Warning word: **WARNING**

Hazard information	Description of precaution
Causes damage to organs (liver) through prolonged or repeated exposure	Avoid breathing dust/mist/gas/fume/vapors/spray. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling. Call a POISON CENTER or doctor/physician if you feel unwell. Dispose of contents/ container in accordance with local/national regulations.

### Section 3. Composition / information on ingredients

Chemical or common name: Hafnium  
 Chemical formula: Hf  
 Single Substance or Compound: Single substance  
 Composition: 100%  
 CAS #: 7440-58-6  
 RTECS#: MG4600000



High Purity Materials

**KOJUNDO CHEMICAL LABORATORY CO.,LTD.**

TSCA inventory : Listed  
 EINECS: 2311664

#### Section 4. First aid measures

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids.  
 Continue to rinse for at least 15 minutes and get medical attention.

Skin contact: Promptly flush contaminated skin with soap or mild detergent and water.  
 Contact physician if irritation continues.

Inhalation: Remove the exposed person immediately and provide fresh air.  
 Get medical attention.

Ingestion: Rinse mouth and throat with water. Get medical attention immediately.

#### Section 5. Fire fighting measures

Extinguishing media:  
 Use media appropriate for surrounding fire.

Fire fighting: The product is not combustible.  
 Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire.

#### Section 6. Accidental release measures

Personal Precautions:  
 Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts.

Environmental hazard precautions:  
 Shut off leak if without risk.  
 Prevent flow out to river, etc. so as not to badly affect.

Method for containment and cleaning up:  
 Indoor leakage: Ventilate as much as possible until the cleaning is completed.  
 Outdoor leakage: Work from the windward and evacuate the leeward crowd.  
 Gather up, pack in closed DOT-approved waste container as much as possible.  
 Carefully collect remnant and move to a safe place.

#### Section 7. Handling and storage

##### Precautions to be taken in handling:

Safe handling: Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen.  
 Avoid prolonged or repeated exposure.

##### Precautions to be taken in storage:

General precautions: Store the material in a sealed container.  
 Store in a cool, dry, well ventilated and dark place away from incompatible materials.

#### Section 8. Exposure controls / personal protection

Exposure guideline: ACGIH (2019) : TLV-TWA 0.5 mg/m<sup>3</sup>  
 OSHA (2006) : PEL-TWA 0.5 mg/m<sup>3</sup>

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, impervious gloves, protective wear, protective boots.



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## Section 9. Physical and chemical properties

Appearance:	Gray solid
Chemical formula:	Hf
Formula weight:	178.49
Melting point:	2227 °C
Boiling point:	4602 °C
Density:	13.31 g/cm <sup>3</sup>
Solubility:	Dissoluble ; hydrofluoric acid Insoluble ; water
Flammable:	Non-combustible substance
Oxidation:	None

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## Section10. Stability and reactivity

Stability:	Stable in closed container.
Reactivity:	
Incompatibility:	Strong acid, strong oxidizing agents, halogens, phosphorus, sulfur, oxygen

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## Section11. Toxicological information

Acute toxicity:	GHS : No data available
Skin corrosive / irritation:	GHS : No data available
Serious eye damage / irritation:	GHS : No data available
Respiratory sensitization:	GHS : No data available
Skin sensitization:	GHS : No data available
Germ cell mutagenicity:	GHS : No data available
Carcinogenicity:	GHS : No data available
Reproductive toxicity:	GHS : No data available
Specific target organ toxicity	
– single exposure:	GHS : No data available
– repeated exposure:	GHS : Category 2 ; May cause damage to organ (liver) through prolonged or repeated exposure
Aspiration hazard:	GHS : No data available

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## Section12. Ecological information

Ecotoxicity:	
Hazardous to the aquatic environment	
– acute toxicity:	GHS : No data available
– chronic toxicity:	GHS : No data available
Hazardous to the ozone layer	GHS : No data available No Freon or Halon
Fish toxicity:	No data available
Degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available

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## Section13. Disposal considerations

Disposal method:	User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste.
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**Section 14. Transport information**

UN classification: Non-hazards

UN number: None

HS code: 8112.99

Marine pollution: None

Precautions: Container should be transported in a secure position, in a well-ventilated vehicle.

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**Section 15. Regulatory information**

TSCA inventory: listed.

Please refer to any other local / national measures that may be relevant.

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**Section 16. Other information**

This SDS is only for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product.

Some new information or amendments may be added afterwards.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.

