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## MATERIAL SAFETY DATA SHEET

### Section 1- PRODUCT IDENTIFICATION

COMPOSITION <b>HfC</b>	PRODUCT NAME <b>Hafnium Carbide</b>
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### Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

MATERIAL OR COMPONENT	CAS NUMBER	WT%	EXPOSURE LIMITS	
			OSHA PEL (Mg/M3)	ACGIH TLV(MG/M3)
<b>HfC</b>	<b>12069-85-1</b>	<b>100</b>	<b>0.5mg/m<sup>3</sup></b>	<b>0.5mg/m<sup>3</sup></b>

### Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR <b>Odorless black powder</b>
MELTING POINT (BASE METAL) <b>Approximately 3890</b>	SPECIFIC GRAVITY <b>12.20g/cc</b>

### Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) <b>N/A</b>	Flammable Limits <b>N/A</b>	LEL <b>N/A</b>	UEL <b>N/A</b>
EXTINGUISHING MEDIA <b>Dry Chemical, CO2, sand or graphite. DO NOT USE WATER!</b>			
SPECIAL FIRED FIGHTING PROCEDURES <b>Wear a self contained breathing apparatus and full protective clothing.</b>			
UNUSUAL FIRE AND EXPLOSION HAZARDS <b>Dust explosion hazard. Material may form flammable methane gas on contact with moisture. May also generate toxic fumes if involved in a fire.</b>			

### Section 5- REACTIVITY DATA

STABILITY <b>Stable</b>	INCOMPATIBILITY (MATERIALS TO AVOID) <b>Strong acids &amp; oxidizers</b>
CONDITIONS TO AVOID <b>Heat &amp; Moisture</b>	
HAZARDOUS DECOMPOISTION PRODUCTS <b>H2 gas from contact w/ acids.</b>	

### Section 6- HEALTH HAZARD GUIDE

MAJOR EXPOSURE HAZARD <input type="checkbox"/> Inhalation <input type="checkbox"/> Skin <input type="checkbox"/> Skin Absorption <input type="checkbox"/> Eye Contact <input type="checkbox"/> Ingestion
EFFECTS OF OVEREXPOSURE <b>INHALATION:</b> Mild respiratory irritant. May act as a nuisance dust. <b>DERMAL/EYE CONTACT:</b> Irritant, eyes may water. <b>OTHER:</b> Low in toxicity. Chronic exposure may lead to liver damage (tested on lab animal)

EMERGENCY & FIRST AID PROCEDURES

**INHALATION:** Remove from exposed area to fresh air; give oxygen if breathing is difficult.

**INGESTION:** Give 1-2 glasses of milk or water to induce vomiting if large quantity ingested.

**SKIN CONTACT:** Wash affected area with soap or mild detergent.

**EYE CONTACT:** Flush eyes with lukewarm water lifting up the upper and lower lids for at least fifteen minutes.

**Section 7- SPILL OR LEAK PROCEDURES**

SPILL OR LEAK PROCEDURES

**Isolate area; insure proper ventilation and that water/moisture are kept out of area. Vacuum spill. Take care not to raise dust. Wear a self contained breathing apparatus and full protective clothing**

WASTE DISPOSAL METHODS

**Dispose of in accordance with applicable federal, state and local regulations.**

**Section 8- SPECIAL PROTECTION**

RESPIRATORY

**Wear NIOSH approved dust-mist respirator.**

VENTILATION

**Maintain exposure below TLV. Handle in controlled inert atmosphere. Mechanical ventilation recommended.**

EYE PROTECTION & PROTECTIVE CLOTHING

**Safety glasses**

**Section 9- SPECIAL PRECAUTIONS**

**Store in a cool dry place away from heat and incompatible materials. Wash thoroughly after handling and before eating.**

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