

化学品安全技术说明书

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**MSDS标题**

HAFNIUM MSDS报告

**产品标题**

金属铪粉

**CAS号**

7440-58-6

**化学品及企业标识**

**PRODUCT NAME**

HAFNIUM

**NFPA**

Flammability	3
Toxicity	2
Body Contact	2
Reactivity	2
Chronic	2

SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

**PRODUCT USE**

Found in all zirconium- containing minerals. Extracted from the mineral cyrtolite. Used in control rods in water- cooled nuclear reactors, getters in vacuum tubes, electrodes, light- filaments.

## **SYNONYMS**

Hf

## **CANADIAN WHMIS SYMBOLS**

None

## **EMERGENCY OVERVIEW**

### **RISK**

Spontaneously flammable in air.

Flammable.

May cause fire.

## **POTENTIAL HEALTH EFFECTS**

### **ACUTE HEALTH EFFECTS**

#### **SWALLOWED**

Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality (death) rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

#### **EYE**

Although the material is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

#### **SKIN**

The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

#### **INHALED**

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless,

good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. Injections of hafnium oxide or carbide into airways may cause scarring of the lungs.

## **CHRONIC HEALTH EFFECTS**

Principal routes of exposure are usually by inhalation of generated dust and skin contact. Metallic dusts generated by the industrial process give rise to a number of potential health problems. The larger particles, above 5 micron, are nose and throat irritants. Smaller particles however, may cause lung deterioration. Particles of less than 1.5 micron can be trapped in the lungs and, dependent on the nature of the particle, may give rise to further serious health consequences. Prolonged ingestion of hafnium is moderately toxic. There may be liver changes.

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