



LTS Research Laboratories, Inc.
Safety Data Sheet
Hafnium oxychloride

1. Product and Company Identification

Trade Name: Hafnium oxychloride
Chemical Formula: HfOCl₂
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H290: May be corrosive to metals
H314: Causes severe skin burns and eye damage
H318: Causes serious eye damage

Precautionary Statements: P260: Do not breathe dust/fume/gas/mist/vapours/spray
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331+P310: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician
P303+P335+P361+P353: IF ON SKIN (or hair): Brush off loose particles from skin. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P363: Wash contaminated clothing before reuse
P390: Absorb spillage to prevent material damage
P402: Store in a dry place
P406: Store in a corrosive resistant container with a resistant inner liner

HMIS Health Ratings (0-4):
Health: 3
Flammability: 0
Physical: 0

3. Composition

Chemical Family: Ceramic
Additional Names: Hafnium chloride oxide, Hafnium chloride hydroxide, Hafnium dichloride dihydroxide

Hafnium oxychloride (HfOCl₂):
Percentage: 0-100 wt%
CAS #: 13759-17-6
EC #: 237-345-3

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion: Seek immediate medical attention.
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

5. Firefighting Measures

Flammability: Non-flammable

Extinguishing Media: No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. Do not use water for metal fires – use CO₂, sand, extinguishing powder.

Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.

Environmental Precautions: Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions: Wash thoroughly after handling.
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10. Store in a corrosive resistant container with a resistant inner liner. Protect from moisture; reacts with water. Protect from direct sunlight.

Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves with minimum thickness of 0.11 mm
Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Pungent, Slight chlorine
Water Solubility:	1080 g/L
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	265.40 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents, metals
Incompatible Conditions:	Water/moisture, sunlight, alcohols, phenols, amines, rubber, and some plastics
Hazardous Decomposition Products:	Metal oxide fume, hydrogen chloride gas

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye damage
Skin:	Causes severe skin burns
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	May cause acute gastrointestinal effects if swallowed. Contact with moist skin may cause skin burns. May cause breathing difficulties if inhaled. May cause skin burns. May cause burning sensation or redness in the eyes. May cause severe respiratory irritation if inhaled. May cause acute gastrointestinal effects if swallowed.
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	3500 mg/kg for rat by mouth
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A

Very Persistent, Very Bioaccumulative: N/A
Notes: N/A

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous for transportation



Hazard Class: 8 Corrosive Substances
Packing Group: II
UN Number: UN1759
Proper Shipping Name: Corrosive solids, n.o.s. (Hafnium oxychloride)

15. Regulatory Information

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

Document Last Revised: 05/16/2019