



1. Product and Company Identification

Trade Name: Hafnium Hydride
Chemical Formula: HfH_2
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:

- H228: Flammable solid
- H261: In contact with water releases flammable gas
- H302: Harmful if swallowed
- H312: Harmful in contact with skin
- H319: Causes serious eye irritation
- H332: Harmful if inhaled

Precautionary Statements:

- P210: Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
- P223: Do not allow contact with water.
- P231+P232: Handle under inert gas Protect from moisture.
- P240: Ground/bond container and receiving equipment.
- P261: Avoid breathing dust.
- P264 Wash face, hands and any exposed skin thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P335+P334: Brush off loose particles from skin. Immerse in cool water.
- P302+P352: IF ON SKIN: Wash with plenty of water.
- P304+P340: IF INHALED: Remove person to fresh air and keep 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.
- P402+P404: Store in a dry place. Store in a closed container.

HMIS Health Ratings (0-4):

Health:	1
Flammability:	2
Physical:	2

3. Composition

Chemical Family:	Inorganic Compound
Additional Names:	N/A

Hafnium Hydride (HfH ₂):	
Percentage:	0-100 wt%
CAS #:	12770-26-2
EC #:	N/A

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:	Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.
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, except as powder
Extinguishing Media:	Alcohol resistant foam. Carbon dioxide. Dry chemical powder. Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.
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.
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:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Greyish Black
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	N/A
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	11.5 g/cc
Molecular weight:	180.51 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Strong Acids, Strong oxidizing agents, Alcohols, Water, Moisture, Halogens
Incompatible Conditions:	Flames, Hot Surfaces, Sources of Ignition, Heat
Hazardous Decomposition Products:	Hafnium oxide fumes, Nitrogen oxide fumes, Hafnium halide vapors

11. Toxicological Information

Potential Health Effects:	
Eyes:	May cause irritation
Skin:	Harmful in contact with skin
Ingestion:	Harmful if swallowed
Inhalation:	Harmful if inhaled
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	No
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
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: 4.3 (4.1)
Packing Group: II
UN Number: UN3132
Proper Shipping Name: Water-reactive solid, flammable, n.o.s. (Hafnium Hydride)

15. Regulatory Information

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

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.

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