

Hafnium Sulfate	Pricing >
Hafnium Sulfate Solution	Pricing >
Signal Word	N/A
Hazard Statements	N/A
Hazard Codes	N/A
Risk Codes	N/A
Safety Statements	N/A
Transport Information	NONH for all modes of transport
WGK Germany	3

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SAFETY DATA SHEET

Date Accessed: 04/25/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #15823-43-5

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification
Classification under 2012 OSHA Hazard

Communication Standard (29 CFR 1910.1200)
Label Elements
None required
Hazards not otherwise classified (HNOC)
None identified

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component
Sulfuric acid, hafnium(4+) salt (2:1)
CAS-No
15823-43-5

SECTION 4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects
None reasonably foreseeable.

Notes to Physician Treat symptomatically

SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media Not combustible.

Unsuitable Extinguishing Media No information available

Flash Point No information available

Method - No information available

Autoignition Temperature No information available

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Sulfur oxides. Hafnium oxide.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing
apparatus pressure-demand, MSHA/NIOSH
(approved or equivalent) and full
protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation.
Use personal protective equipment as required. Avoid
dust
formation.
Environmental Precautions Should not be released
into the environment. See Section 12 for additional
Ecological
Information. Do not allow material to contaminate
ground water system. Do not flush into
surface water or sanitary sewer system.
Methods for Containment and Clean
Up
Sweep up and shovel into suitable containers for
disposal. Avoid dust formation.

SECTION 7. HANDLING AND STORAGE

Handling Wear personal protective equipment/face
protection. Ensure adequate ventilation. Avoid
contact with skin, eyes or clothing. Avoid ingestion
and inhalation. Avoid dust formation.
Storage Keep containers tightly closed in a dry, cool
and well-ventilated place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures None under normal use
conditions.
Personal Protective Equipment
Eye/face Protection Wear appropriate protective
eyeglasses or chemical safety goggles as described
by
OSHA's eye and face protection regulations in 29
CFR 1910.133 or European Standard EN166.
Skin and body protection Wear appropriate protective
gloves and clothing to prevent skin exposure.
Respiratory Protection No protective equipment is
needed under normal use conditions.
Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid

Appearance No information available

Odor No information available

Odor Threshold No information available

pH No information available

Melting Point/Range No data available

Boiling Point/Range No information available

Flash Point No information available

Evaporation Rate Not applicable

Flammability (solid,gas) No information available

Flammability or explosive limits

Upper No data available

Lower No data available

Vapor Pressure No information available

Vapor Density Not applicable

Specific Gravity No information available

Solubility No information available

Partition coefficient; n-octanol/water No data available

Autoignition Temperature No information available

Decomposition Temperature No information available

Viscosity Not applicable

Molecular Formula $\text{Hf}(\text{SO}_4)_2$

Molecular Weight 370.62(anhy)

SECTION 10. STABILITY AND REACTIVITY

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products.

Incompatible Materials Oxidizing agent

Hazardous Decomposition Products Sulfur oxides, Hafnium oxide

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic

Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed

No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Persistence and Degradability May persist

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

SECTION 15. REGULATORY INFORMATION

TSCA 12(b) - Notices of Export Not applicable
U.S. Federal Regulations
SARA 313 Not applicable
SARA 311/312 Hazard Categories See section 2 for more information
CWA (Clean Water Act) Not applicable
Clean Air Act Not applicable
OSHA - Occupational Safety and Health Administration
Not applicable
CERCLA Not applicable
California Proposition 65 This product does not contain any Proposition 65 chemicals.
U.S. State Right-to-Know Regulations
Not applicable
U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N
U.S. Department of Homeland Security
This product does not contain any DHS chemicals.
Other International Regulations
Mexico - Grade No information available

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.
