

SAFETY DATA SHEET

Date Revised: 05/15/2015

SECTION 1. IDENTIFICATION

Product Name: Hafnium Sulfide

CAS #: 18855-94-2

Relevant identified uses of the substance: Scientific research and development

Supplier details:

Stanford Advanced
Materials
23661 Birtcher Dr.
Lake Forest, California,
92630

Emergency telephone number:

International: (949) 812-6690

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS07

Signal word

Warning

Hazard-determining components of labeling:

Hafnium sulfide, 99%

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 1
Fire = 0
Reactivity = 2
The substance demonstrates unusual reactivity with water.
HMIS-ratings (scale 0 - 4)
Health = 1
Fire = 0
Reactivity = 2
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS # / Substance Name
18855-94-2 Hafnium sulfide
Identification number(s)
EC number: 234-885-1

SECTION 4. FIRST AID MEASURES

Description of first aid measures
If inhaled:
In case of unconsciousness place patient stably in side position for transportation.
In case of skin contact:
Immediately wash with soap and water; rinse thoroughly.
In case of eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
If swallowed:
If symptoms persist consult doctor.
Most important symptoms and effects, both acute and delayed
No data available
Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents:

Water

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

Protective equipment:

Mouth respiratory protective device.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Use personal protective equipment. Keep unprotected persons away.

Environmental precautions:

No special measures required.

Methods and materials for containment and cleanup:

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

No special precautions are necessary if used correctly.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Do not store together with acids.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Specific end use(s)

No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:

No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

Not required.

Additional information:

The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Powder

Odor: Sulphurous

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: No data available.

Boiling point/Boiling range: Undetermined.

Flash point: N/A

Flammability (solid, gas): Contact with water liberates extremely flammable gases.

Ignition temperature:

Decomposition temperature: No data available.

Autoignition: No data available.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available
Upper: No data available.
Vapor pressure: no data hPa
Density at 20 °C (68 °F): No data available.
Relative density: No data available.
Vapor density: N/A
Evaporation rate: N/A
Solubility in Water (H₂O): Insoluble.
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Organic solvents: No data available.
Solids content: No data available.
Other information
No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity
Chemical stability
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions
Contact with water releases flammable gases.
Conditions to avoid
No data available
Incompatible materials:
No data available
Hazardous decomposition products:
No dangerous decomposition products known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin:
Irritant to skin and mucous membranes.
on the eye:
Irritating effect.
Sensitization:
No sensitizing effects known.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity:
No data available

Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Additional ecological information:
Not known to be hazardous to water.
Results of PBT and vPvB assessment
PBT:
N/A
vPvB:
N/A
Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation:
Must not be disposed of together with household garbage. Do not allow product to enter drains, sewage systems, or other water courses system.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, ADN, IMDG, IATA
not regulated
UN proper shipping name
DOT, ADN, IMDG, IATA
not regulated
Transport hazard class(es)
DOT, ADN, IMDG, IATA
Class
not regulated
Packing group
DOT, IMDG, IATA
not regulated
Environmental hazards:
Marine pollutant:
No
Special precautions for user
N/A
Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code
N/A

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act):

Substance is listed.

Proposition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

SECTION 16. OTHER INFORMATION

This material safety data sheet is offered solely for your information, consideration, and investigation.

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