MATERIAL SAFETY DATA SHEET
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 07-15-02

CHEMICAL IDENTITY

LABEL IDENTITY
CHEMICAL NAME/SYNONYMS
FORMULA
CALCULATED MOLECULAR WEIGHT
CHEMICAL FAMILY
CAS REGISTRY NUMBER

HAFNIUM NITRIDE
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HfN
192.50
METAL NITRIDE
25817-87-2

%: 100

TLV: 0.5mg (Hf) / m³
OSHA/PEL: 0.5 mg (Hf) / m³

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR
Yellow-brown crystalline solid, ammonia odor in moist air.

BOILING POINT
NE or NA

DENSITY (gm/cc)
ND

VAPOR PRESSURE @ 20°
ND

% VOLATILE BY VOLUME (%)
NA

REACTION WITH WATER
None

EVAPORATION RATE (H₂O=1)
NA

SOLUBILITY IN WATER
Insoluble

MELTING POINT
3305 °C

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT
NA

AUTOIGNITION TEMPERATURE (°C)
NA

FLAMMABILITY
Non-flammable

EXTINGUISHING MEDIA
NA  (Use suitable extinguishing agent for Surrounding materials and type of fire

SPECIAL FIRE FIGHTING PROCEDURES
Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

UNUSUAL FIRE & EXPLOSION HAZARDS
None recorded
HAFNIUM NITRIDE
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HEALTH HAZARD INFORMATION

TOXICITY DATA
*no data on this compound*

Hf data: unk-mus LD50: 76mg/kg

HMIS RATING:
- HEALTH: 1
- FLAMMABILITY: 0
- REACTIVITY: 0
- PERSONAL PROTECTION: B

 ROUTES OF ENTRY
- INHALATION: Yes
- SKIN: Yes
- INGESTION: Yes
- EYES: Yes

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None

EFFECTS OF OVEREXPOSURE (acute and chronic):
- INHALATION: May cause irritation to the nose, throat and mucous membranes.
- INGESTION: Considered to be non-toxic due to poor absorption in the alimentary tract of mammals. Chronic – May cause damage to the liver.
- DERMAL: May cause irritation, redness and itching.
- EYE: May cause irritation, redness, itching and watering.
- TARGET ORGANS: Liver

CARCINOGENICITY: None
- NTP: No
- IARC MONOGRAPHS: No
- OSHA REGULATE: No

EMERGENCY FIRST AID PROCEDURES:
- INGESTION: Administer 1-2 glasses of water or milk to induce vomiting
- INHALATION: Remove to fresh air, administer oxygen if breathing is difficult
- SKIN CONTACT: Brush material off skin, wash affected area with soap and water
- EYE CONTACT: Flush eyes for at least 15 minutes with lukewarm water

SEEK MEDICAL ATTENTION IMMEDIATELY FOR ALL CONDITIONS MENTIONED ABOVE

REACTIVITY DATA

STABILITY: Stable
CONDITIONS CONTRIBUTING TO INSTABILITY: None
INCOMPATIBILITY (MATERIALS TO AVOID): None recorded
HAZARDOUS DECOMPOSITION PRODUCTS: None recorded
HAZARDOUS POLYMERIZATION: Will Not Occur
CONDITIONS TO AVOID: None
HAFNIUM NITRIDE  
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SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Wear appropriate respiratory and protective equipment specified in section VIII-control measures. 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 proper disposal. Take care not to raise dust.

WASTE DISPOSAL METHOD:
Consult federal, state and local regulations for proper disposal.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION
NIOSH approved dust-mist-fume cartridge respirator

LOCAL EXHAUST
Maintain below TLV for Hf

MECHANICAL (general)
Recommended

SPECIAL
NA

OTHER
NA

PROTECTIVE GLOVES
Rubber gloves

EYE PROTECTION
Safety glasses

OTHER PROTECTIVE EQUIPMENT
Wear protective clothing to prevent contamination of skin and clothes

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:
None

TRANSPORTATION REQUIREMENTS
DOT CLASS: Not Classified
UN NUMBER: NC
IMCO CLASS: NC
OTHER:

PRECAUTIONARY LABELING
Store in cool dry area. Store in tightly sealed container. Wash thoroughly after handling.

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL. ANGSTROM SCIENCES MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

NA= NOT APPLICABLE  
ND= NO DATA FOUND