

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Barium Hydride

**Product Code:** BA-HID-05

**CAS Number:** 13477-09-3

**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:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS02 Flame

Water-react. 1 H260 In contact with water releases flammable gases, which may ignite spontaneously.

GHS07

Acute Tox. 4

H302 Harmful if swallowed.

Acute Tox. 4

H332 Harmful if inhaled.

GHS label elements

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

Hazard pictograms



GHS02

GHS07

Signal word

Danger

Hazard-determining components of labeling: barium dihydride

Hazard statements

H260

In contact with water releases flammable gases, which may ignite spontaneously.

H302+H332 Harmful if swallowed or if inhaled.

Precautionary statements

P231+P232

Handle under inert gas. Protect from moisture.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P422

Store contents under inert gas.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system: NFPA ratings (scale 0 - 4)

Health = 3

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 2

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

CAS # / Substance Name

13477-09-3 barium dihydride

Identification number(s)

EC number: 236-763-3

Index number: 056-002-00-7

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## SECTION 4. FIRST AID MEASURES

Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

In case of skin contact:

Immediately rinse with water.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Immediately call a doctor.

Information for 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

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents:

Sand. Do not use water.

CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

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.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Environmental precautions:

Do not allow product to enter drains, sewage systems, or other water courses.

Inform respective authorities in case of see page into water courses, or sewage systems.

Methods and materials for containment and cleanup:

Dispose contaminated material as waste according to item 13.

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.

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## **SECTION 7. HANDLING AND STORAGE**

Handling:

Precautions for safe handling

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

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:  
Not required.  
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

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## **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:  
13477-09-3 barium dihydride  
PEL Long-term value: 0.5 mg/m<sup>3</sup> as Ba  
REL Long-term value: 0.5 mg/m<sup>3</sup> as Ba  
TLV Long-term value: 0.5 mg/m<sup>3</sup> as Ba  
Additional information:  
The lists that were valid during the creation were used as basis.  
Exposure controls  
Personal protective equipment:  
General protective and hygienic measures:  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
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: Safety glasses

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties  
Appearance:  
Form: Crystalline

Color: Grey  
Odor: Odorless  
Odor threshold: No data available.  
pH: N/A  
Melting point/Melting range: 675 dec °C (1247 dec °F)  
Boiling point/Boiling range: No data available.  
Flash point: N/A  
Flammability (solid, gas): Product is not flammable.  
Ignition temperature: No data available.  
Decomposition temperature: No data available.  
Autoignition: No data available.  
Danger of explosion: No data available.  
Explosion limits: No data available.  
Lower: No data available.  
Upper: No data available.  
Vapor pressure: no data hPa  
  
Density at 20 °C (68 °F): 4.21 g/cm<sup>3</sup> (35.132 lbs/gal)  
Relative density: No data available.  
Vapor density: N/A  
Evaporation rate: N/A  
Solubility in Water (H<sub>2</sub>O): Insoluble.  
Partition coefficient (n-octanol/water): No data available.  
Viscosity: No data available.  
Dynamic: N/A  
Kinematic: N/A  
Solvent content: No data available.  
Organic solvents: 0.0 %  
VOC content: 0.0 g/l / 0.00 lb/gl  
Solids content: 100.0 %  
Other information: No data available

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## SECTION 10. STABILITY AND REACTIVITY

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

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## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects  
Acute toxicity:  
Primary irritant effect:  
on the skin:

No irritant effect.  
on the eye:  
No irritating effect.  
Sensitization:  
No sensitizing effects known.  
Additional toxicological information:  
Carcinogenic categories  
IARC (International Agency for Research on Cancer)  
Substance is not listed.  
NTP (National Toxicology Program)  
Substance is not listed.  
OSHA-Ca (Occupational Safety & Health Administration)  
Substance is not listed.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
Aquatic toxicity:  
No data available  
Persistence and degradability  
No data available  
Behavior in environmental systems:  
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

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## **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.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA  
UN3134  
UN proper shipping name  
DOT, IATA

Water-reactive solid, toxic, n.o.s.

IMDG

WATER-REACTIVE SOLID, TOXIC, N.O.S.

Transport hazard class(es)

DOT

Class

4.3 Substances which, in contact with water, emit flammable gases

Label

4.3, 6.1

IMDG

Class

4.3 Substances which, in contact with water, emit flammable gases

Label

4.3/6.1

IATA

Class

4.3 Substances which, in contact with water, emit flammable gases

Label

4.3 (6.1)

Packing group

DOT, IMDG, IATA

I

Environmental hazards:

Marine pollutant:

No

Special precautions for user

N/A

Danger code (Kemler):

423

EMS Number:

F-G,S-N

Stowage Category

D

Handling Code

H1 Keep as dry as reasonably practicable

Segregation Code

SG26 In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N/A

Transport/Additional information:

DOT

Quantity limitations

On passenger aircraft/rail: Forbidden

On cargo aircraft only: 15 kg

IMDG

Limited quantities (LQ)

Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

UN "Model Regulation":

UN 3134 WATER-REACTIVE SOLID, TOXIC, N.O.S., 4.3 (6.1), I

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## 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 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)

13477-09-3 barium dihydride

D, CBD(inh), NL(oral)

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

GHS label elements

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Hazard pictograms

GHS02

GHS07

Signal word

Danger

Hazard-determining components of labeling: barium dihydride

Hazard statements

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P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P422

Store contents under inert gas.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment:



A Chemical Safety Assessment has not been carried out.

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## **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.