

SAFETY DATA SHEET

according to the Global Harmonized System

Sodium boron deuteride

1. Identification of the substance/preparation and of the company/undertaking

Synonyms	Natriumborhydrid-d4
Use of the Substance/Preparation	Reagent
Company/Undertaking Identification	ARMAR AG Müligasse 7 CH-5312 Döttingen Schweiz Tel. +41 56 245 2600 admin@armar.ch
Emergency telephone number	Tox-Zentrum Zürich : 145 / +41 44 251 51 51 [24h/7d]
Revision Date	24.03.2010
Version	GHS 1

2. Hazards identification



DANGER!

Acute toxicity, dermal, Cat. 3
Acute toxicity, oral, Cat. 3
Skin corrosion/irritation, Cat. 1A
Substances and mixtures which in contact with water emit flammable gases, Cat. 1

3. Composition/information on ingredients

Components		Health hazards	CAS	REACH No.
Sodium boron deuteride	> 90%	TADe3 TAO ₃ CSk1A Fwatfgas1	15681-89-7	

4. First aid measures

Inhalation	Move to fresh air. Consult a physician after significant exposure.
Skin contact	Wash off immediately with soap and plenty of water. Consult a physician for severe cases.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Protect unharmed eye. Consult an ophthalmologist.
Ingestion	Immediately give plenty of water (if possible charcoal slurry). Prevent vomiting if possible. Consult a physician for severe cases.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical. Limestone powder. Sand. Dry sodium carbonate.
Extinguishing media which must not be used for safety reasons	High volume water jet.
Special protective equipment for firefighters	Standard procedure for chemical fires.
Specific methods	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

6. Accidental release measures

Personal precautions	Use personal protective equipment.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Use mechanical handling equipment. After cleaning, flush away traces with water. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Handling	Plan first aid action before beginning work with this product. Wear personal protective equipment. Handle and open container with care. Ingestion, exposure to skin and eyes and inhalation of any generated vapours should be avoided.
Storage	Store at room temperature in the original container. Keep container tightly closed in a dry and well-ventilated place. Store in a place accessible by authorized persons only.

8. Exposure controls / personal protection

Occupational exposure controls Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice.

Personal protection equipment

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Gloves made of Nitril.

Eye protection Safety glasses with side-shields conforming to EN 166. Eye wash bottle with pure water.

9. Physical and chemical properties

Form Crystalline.

Colour Off-white.

Odour None.

Physical and chemical properties pH: 11 (1 % solution).
Flash point: 70 °C.
Water solubility: Decomposes in contact with water

10. Stability and reactivity

Stability Risk of decomposition.

Conditions to avoid Burning produces obnoxious and toxic fumes. Heating can release hazardous gases.

Materials to avoid Reacts violently with water, liberating highly flammable gases.

Hazardous decomposition products None under normal use.

11. Toxicological information

Acute toxicity	LD50/oral/rat = 175 mg/kg.
Local effects	Extremely corrosive and destructive to tissue. Toxic in contact with skin and if swallowed. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Long term toxicity	Symptoms may be delayed.
Sensitization	None.
Further information	Use of alcoholic beverages may enhance toxic effects.

12. Ecological information

Ecotoxicity	May change pH of waters.
Bioaccumulative potential	Does not bioaccumulate.

13. Disposal considerations

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	Offer rinsed packaging material to local recycling facilities.

14. Transport information

ADR/RID	Proper shipping name SODIUM BOROHYDRIDE UN No 1426. Class 4.3. Packing group I. ADR/RID-Labels 4.3. Classification code W2. Risk No. X423. Limited quantity LQ0. Tunnel code E
IMO	Proper shipping name Sodium borohydride UN No 1426. Class 4.3. Packing group I. ADR/RID-Labels 4.3. Limited quantity Keine. EmS F-G, S-O.

ICAO Proper shipping name Sodium borohydride
UN No 1426.
Class 4.3.
Packing group I.
Packing instruction (passenger aircraft): Forbidden.
Packing instruction (LQ): –.
Packing instruction (cargo aircraft): 412 (15 kg).

15. Regulatory information

GHS-Classification
Signal Word DANGER!
Hazard Statements In contact with water releases flammable gases which may ignite spontaneously.
Toxic if swallowed.
Toxic in contact with skin.
Causes severe skin burns and eye damage.

Precautionary Statements Do not breathe dust/fume/gas/mist/vapours/spray.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Wash contaminated clothing before reuse.
Store locked up.

GHS product identifier Dispose of contents/container to an approved waste disposal plant.
Sodium boron deuteride, CAS-No. 15681-89-7, EC-No. 239-764-7

EC-Symbol(s) F - Highly flammable.
T - Toxic.

R-phrase(s) R15: Contact with water liberates extremely flammable gases.
R24/25: Toxic in contact with skin and if swallowed.
R35: Causes severe burns.

S-phrase(s) S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Regulatory Information The product is classified and labelled according to Regulation (EC) No. 1272/2008 (GHS/CLP).
The product is classified and labelled in accordance with Directive 1999/45/EC.

16. Other information

Recommended use	Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use.
GHS-Classification	TAOr3: Acute toxicity, oral, Cat. 3 TADe3: Acute toxicity, dermal, Cat. 3 CSk1A: Skin corrosion/irritation, Cat. 1A Fwatfgas1: Substances and mixtures which in contact with water emit flammable gases, Cat. 1
Further information	Take notice of the directions of use on the label.
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification.