

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
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## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

Deuterium bromide, 46 wt% in Deuterium oxide

### 1.1. Catalog No.:

1063

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

ARMAR (Europa) GmbH  
Permoserstrasse 15

04318 Leipzig  
Germany

Tel. +49 341 5295 183  
Fax. +49 341 5295 182  
E-mail: info@armar-europa.de

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Skin corrosion (Category 1A), H314  
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2 Label elements  
Labelling according Regulation (EC) No 1272/2008  
Pictogram Signal word Danger  
Hazard statement(s)  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
Precautionary statement(s)  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

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

Supplemental Hazard Statements  
none

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Formula : DBr

Molecular weight : 81,92 g/mol

CAS-No. : 13536-59-9

EC-No. : 236-894-6

Component Classification Concentration

Deuterium bromide

Skin Corr. 1A; STOT SE 3;

H314, H335

<= 100 %

#### 3.1.1. Formula

BrD

#### 3.1.2. Molecular Weight (g/mol)

81.92

#### 3.1.3. CAS-No.

13536-59-9

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician. In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

2.2) and/or in section 11

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

Hydrogen bromide gas

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information  
No data available

## 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.  
For personal protection see section 8.  
6.2 Environmental precautions  
Do not let product enter drains.  
6.3 Methods and materials for containment and cleaning up  
Clean up promptly by sweeping or vacuum.  
6.4 Reference to other sections  
For disposal see section 13

## 7. HANDLING AND STORAGE

7.1 Precautions for safe handling  
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.  
For precautions see section 2.2.  
7.2 Conditions for safe storage, including any incompatibilities  
Keep container tightly closed in a dry and well-ventilated place. Store in cool place.  
Store under inert gas. hygroscopic  
7.3 Specific end use(s)  
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters Components with workplace control parameters 8.2 Exposure controls Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Personal protective equipment

Eye/face protection Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure Do not let product enter drains.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties  
a) Appearance Form: gaseous  
b) Odour No data available  
c) Odour Threshold No data available  
d) pH No data available  
e) Melting point/freezing point  
Melting point/range: -87 °C - lit.  
f) Initial boiling point -67 °C - lit. and boiling range  
g) Flash point No data available  
h) Evaporation rate No data available  
i) Flammability (solid, gas)  
No data available  
j) Upper/lower flammability or explosive limits  
No data available  
k) Vapour pressure 23.070,09 hPa at 21,00 °C  
l) Vapour density No data available  
m) Relative density 1,537 g/cm<sup>3</sup>

- n) Water solubility No data available
- o) Partition coefficient:  
n-octanol/water  
No data available
- p) Auto-ignition  
temperature  
No data available
- q) Decomposition  
temperature  
No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available
- 9.2 Other safety information  
No data available

## 10. STABILITY AND REACTIVITY

- 10.1 Reactivity  
No data available
- 10.2 Chemical stability  
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions  
No data available
- 10.4 Conditions to avoid  
Air Light. Fumes strongly in moist air.
- 10.5 Incompatible materials  
Strong oxidizing agents, Strong bases, Ammonia, Ozone, Halogens, Amines, Gives off  
hydrogen by reaction with metals.
- 10.6 Hazardous decomposition products  
No data available  
Hazardous decomposition products formed under fire conditions. - Hydrogen bromide gas  
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
  - Acute toxicity
  - Inhalation: No data available
  - Skin corrosion/irritation  
No data available
  - Serious eye damage/eye irritation  
No data available
  - Respiratory or skin sensitisation  
No data available
  - Germ cell mutagenicity  
No data available
  - Carcinogenicity  
IARC: No component of this product present at levels greater than or equal to 0.1% is  
identified as probable, possible or confirmed human carcinogen by IARC.
  - Reproductive toxicity  
No data available
  - Specific target organ toxicity - single exposure  
Inhalation - May cause respiratory irritation.
  - Specific target organ toxicity - repeated exposure  
No data available
  - Aspiration hazard  
No data available
- Additional Information  
RTECS: Not available

## 12. ECOLOGICAL INFORMATION

- 12.1 Toxicity  
No data available
- 12.2 Persistence and degradability  
No data available
- 12.3 Bioaccumulative potential  
No data available
- 12.4 Mobility in soil  
No data available
- 12.5 Results of PBT and vPvB assessment  
This substance/mixture contains no components considered to be either persistent,

bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects  
No data available

### 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods  
Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging  
Dispose of as unused product

### 14. TRANSPORT INFORMATION

14.1 UN number  
ADR/RID: 1048 IMDG: 1048 IATA: 1048  
14.2 UN proper shipping name  
ADR/RID: HYDROGEN BROMIDE, ANHYDROUS  
IMDG: HYDROGEN BROMIDE, ANHYDROUS  
IATA: Hydrogen bromide, anhydrous  
Passenger Aircraft: Not permitted for transport  
Cargo Aircraft: Not permitted for transport  
14.3 Transport hazard class(es)  
ADR/RID: 2.3 (8) IMDG: 2.3 (8) IATA: 2.3 (8)  
14.4 Packaging group  
ADR/RID: - IMDG: - IATA: -  
14.5 Environmental hazards  
ADR/RID: no IMDG Marine pollutant: no IATA: no  
14.6 Special precautions for user  
No data available

### 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.  
15.2 Chemical safety assessment  
For this product a chemical safety assessment was not carried out

### 16. OTHER INFORMATION

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. For lab use only!