

## 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:

1-Butanol-d10

### 1.1. Catalog No.:

1051

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

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards 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  
Flammable liquids (Category 3), H226  
Acute toxicity, Oral (Category 4), H302  
Skin irritation (Category 2), H315  
Serious eye damage (Category 1), H318  
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336  
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)

H226 Flammable liquid and vapor.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H335 + H336 May cause respiratory irritation, and drowsiness or dizziness.  
Precautionary statement(s)  
P261 Avoid breathing vapors.  
P280 Wear protective gloves/ 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.  
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  
Synonyms : Butyl alcohol-d10  
Butyl alcohol-d10  
Formula : C4D10O  
Molecular weight : 84,08 g/mol  
CAS-No. : 34193-38-9  
Component Classification Concentration  
1-Butanol-d10  
Flam. Liq. 3; Acute Tox. 4;  
Skin Irrit. 2; Eye Dam. 1;  
STOT SE 3; H226, H302,  
H315, H318, H335, H336  
Concentration limits:  
≥ 20 %: STOT SE 3,  
H335; ≥ 20 %: STOT SE  
3, H336;  
≤ 100 %

#### 3.1.1. Formula

C4D10O

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

84.18

#### 3.1.3. CAS-No.

34193-38-9

### 4. FIRST AID MEASURES

4.1 Description of first-aid measures  
General advice  
Consult a physician. Show this material 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  
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  
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  
Carbon oxides
- 5.3 Advice for firefighters  
Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information  
Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.  
For personal protection see section 8.
- 6.2 Environmental precautions  
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up  
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).
- 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 vapor or mist.  
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.  
For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities  
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
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

Control parameters Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.  
Appropriate engineering controls Engineering Controls Showers Eyewash stations Ventilation systems  
Individual protection measures, such as personal protective equipment Eye/face protection Wear safety glasses with side shields (or goggles). Skin and Body Protection Wear protective gloves and protective clothing. Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties
  - a) Appearance Form: clear, liquid  
Color: colorless
  - b) Odor No data available
  - c) Odor Threshold No data available
  - d) pH No data available
  - e) Melting  
point/freezing point  
Melting point/range: -89,99 °C
  - f) Initial boiling point  
and boiling range  
116 - 118 °C
  - g) Flash point 34 °C - closed cup
  - h) Evaporation rate No data available

- i) Flammability (solid, gas)  
No data available
- j) Upper/lower flammability or explosive limits  
No data available
- k) Vapor pressure No data available
- l) Vapor density No data available
- m) Relative density 0,92 g/mL at 25 °C 0,92 g/cm<sup>3</sup> at 25 °C
- n) Water solubility No data available
- o) Partition coefficient: n-octanol/water  
No data available
- p) Autoignition 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  
Heat, flames and sparks.
- 10.5 Incompatible materials  
No data available
- 10.6 Hazardous decomposition products  
Hazardous decomposition products formed under fire conditions. - Carbon oxides  
Other decomposition products - No data available  
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
  - Acute toxicity  
No data available
  - Skin corrosion/irritation  
No data available
  - Serious eye damage/eye irritation
  - Respiratory or skin sensitization  
No data available
  - Germ cell mutagenicity
  - Carcinogenicity  
IARC: No ingredient 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
  - Specific target organ toxicity - single exposure  
May cause respiratory irritation.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.
  - Specific target organ toxicity - repeated exposure  
No data available
  - Aspiration hazard  
No data available
  - Additional Information  
RTECS: Not available Central nervous system depression, Gastrointestinal disturbance, drying, cracking of the skin, Skin irritation

## 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

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

### 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 1120 IMDG: 1120 IATA: 1120

14.2 UN proper shipping name

ADR/RID: BUTANOLS

IMDG: BUTANOLS

IATA: Butanols

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

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 material safety data sheet 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!