

# SAFETY DATA SHEET

according to Regulation (EU) No. 453/2010

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## Benzene-d6

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### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

CAS-No.	1076-43-3
EC-No.	214-061-8
Product code	None.
Synonyms	None.

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Preparation	Solvent for NMR spectroscopy
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#### 1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	ARMAR AG Müligasse 7 CH-5312 Döttingen Schweiz Tel. +41 56 245 2600 <a href="mailto:admin@armar.ch">admin@armar.ch</a>
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1.4. Emergency telephone number	Tox-Zentrum Zürich : 145 / +41 44 251 51 51 [24h/7d]
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Version	GHS 2
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## 2. Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)**

Serious eye damage/eye irritation, Cat. 2, H319  
Skin corrosion/irritation, Cat. 2, H315  
Specific target organ toxicity (repeated exposure, inhalation), Cat. 1, H372inh  
Specific target organ toxicity (repeated exposure, dermal), Cat. 1, H372derm  
Specific target organ toxicity (repeated exposure, oral), Cat. 1, H372oral  
Aspiration hazard, Cat. 1, H304  
Flammable liquids, Cat. 2, H225

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Carc. Cat. 2; R45  
Muta. Cat. 2; R46  
F; R11  
Xi; R36/38  
T; R48/23/24/25  
Xn; R65

**Additional information**

For the full text of the phrases mentioned in this Section, see Section 16.

### 2.2. Label elements



**Signal Word  
Hazard Statements**

Danger  
H225: Highly flammable liquid and vapour.  
H304: May be fatal if swallowed and enters airways.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H372derm: Causes damage to organs through prolonged or repeated exposure in contact with skin.  
H372inh: Causes damage to organs through prolonged or repeated exposure if inhaled.  
H372oral: Causes damage to organs through prolonged or repeated exposure if swallowed.

**Precautionary statements**

P210b: Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233: Keep container tightly closed.  
P243: Take precautionary measures against static discharge.  
P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264b: Wash face, hands and any exposed skin thoroughly after handling.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
P303+P361+P353: IF ON SKIN (or hair): Remove/ 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.  
P314: Get medical advice/ attention if you feel unwell.

P331: Do NOT induce vomiting.  
P370+P378: In case of fire: Use carbon dioxide (co2) for extinction.  
P501: Dispose of contents/ container to an approved waste disposal plant.

**Additional advice**

None.

**GHS product identifier**

Benzene-d6, CAS-No. 1076-43-3, EC-No. 214-061-8

**Labelling according to Directives 67/548/EEC or 1999/45/EC**



F - Highly flammable.  
T - Toxic.

**R-phrases(s)**

R45: May cause cancer.  
R46: May cause heritable genetic damage.  
R11: Highly flammable.  
R36/38: Irritating to eyes and skin.  
R48/23/24/25: Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.  
R65: Harmful: may cause lung damage if swallowed.

**S-phrases(s)**

S53: Avoid exposure - obtain special instructions before use.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Hazardous component(s) which must be listed on the label**

None.

**2.3. Other hazards**

No information available.

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### **3. Composition/information on ingredients**

Components		Product identifier
Benzene-d6	> 90%	CAS-No.: 1076-43-3 EC-No.: 214-061-8

For the full text of the phrases mentioned in this Section, see Section 16.

**Hazardous impurities**

None known.

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### **4. First aid measures**

**4.1. Description of first aid measures**

**Inhalation**

Move to fresh air. Consult a physician after significant exposure.

**Skin contact**

Wash with water and soap as a precaution.

<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. If swallowed, seek medical advice immediately and show this container or label.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	None known.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	None known.

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## **5. Firefighting measures**

### **5.1. Extinguishing media**

**Suitable extinguishing media** Use dry chemical, CO<sub>2</sub>, water spray or alcohol foam.

**Extinguishing media which must not be used for safety reasons** High volume water jet.

**5.2. Special hazards arising from the substance or mixture** Solvents may produce excessive pressure under fire-conditions. Sealed containers may rupture and ignite. Cool containers / tanks with water spray. Burning produces irritant fumes.

### **5.3. Advice for firefighters**

**Special protective equipment for firefighters** Standard procedure for chemical fires.

**Specific methods** Do not use a solid water stream as it may scatter and spread fire.

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## **6. Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

**Advice for non-emergency personnel** Remove all sources of ignition. Pay attention to flashback.

**Advice for emergency responders** Handle in accordance with good industrial hygiene and safety practice.

**6.2. Environmental precautions** Do not flush into surface water or sanitary sewer system.

**6.3. Methods and material for containment and cleaning up** Clean up promptly by sweeping or vacuum. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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## 7. Handling and storage

<b>7.1. Precautions for safe handling</b>	Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.
<b>7.3. Specific end use(s)</b>	No information available.

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## 8. Exposure controls/personal protection

### 8.1. Control parameters

**Exposure limit(s)** MAK (Maximale Arbeitsplatzkonzentration): 0.5 ppm.

### 8.2. Exposure controls

**Occupational exposure controls** Avoid contact with skin, eyes and clothing.

#### Personal protection equipment

*Respiratory protection* In the case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

*Hand protection* Gloves made of VITON.

*Eye protection* Safety glasses.

*Skin and body protection* Wear as appropriate: Solvent-resistant apron and boots.

**Thermal hazards** No special measures required.

**Environmental exposure controls** No special measures required.

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## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Form</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Aromatic.
<b>Odour Threshold</b>	No information available.
<b>pH:</b>	No information available.
<b>Melting point/range:</b>	6°C
<b>Boiling point/range:</b>	80°C
<b>Flash point:</b>	-11°C
<b>Evaporation Rate:</b>	No information available.
<b>Flammability:</b>	No information available.
<b>Explosion limits:</b>	8.6% / 1.2%
<b>Vapour pressure:</b>	100 mbar/20°C
<b>Vapor density:</b>	2.7
<b>Relative density:</b>	0.88 g/ml
<b>Water solubility:</b>	1.8 g/l (20°C)
<b>Partition coefficient (n-octanol/water):</b>	2.13
<b>Autoignition temperature:</b>	555°C
<b>Decomposition temperature:</b>	> 600°C
<b>Viscosity:</b>	No information available.
<b>Combustion/explosion hazards:</b>	liquid, flammable
<b>Oxidizing properties:</b>	None

### 9.2. Other information

<b>General Product Characteristics</b>	No information available.
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## 10. Stability and reactivity

<b>10.1. Reactivity</b>	No information available.
<b>10.2. Chemical stability</b>	No decomposition if used as directed.
<b>10.3. Possibility of hazardous reactions</b>	No information available.
<b>10.4. Conditions to avoid</b>	Do not freeze. Heating in air.
<b>10.5. Incompatible materials</b>	Incompatible with oxidizing agents.
<b>10.6. Hazardous decomposition products</b>	None under normal use.

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## 11. Toxicological information

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	LD50/oral/rat = 930 mg/kg. LD50/dermal/rabbit = 8260 mg/kg.
<b>Skin corrosion/irritation</b>	Slight skin irritation.
<b>Serious eye damage/eye irritation</b>	Moderate eye irritation.
<b>Respiratory / Skin Sensitisation</b>	No data available.
<b>Carcinogenicity</b>	Known carcinogen.
<b>Germ cell mutagenicity</b>	Possible mutagen.
<b>Reproductive toxicity</b>	Fertility classification not possible from current data.
<b>Specific target organ toxicity (single exposure)</b>	No data available.
<b>Specific target organ toxicity (repeated exposure)</b>	No data available.
<b>Aspiration hazard</b>	No data available.
<b>Human experience</b>	Potential cancer hazard. CMR effects.

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## 12. Ecological information

<b>12.1. Toxicity</b>	LC50/24h/daphnia = 200 mg/l. LC50/48h/golden orfe = 33 mg/l. LC50/24h/goldfish = 46 mg/l. EC50/72h/algae = 29 mg/l.
<b>12.2. Persistence and degradability</b>	Readily biodegradable.
<b>12.3. Bioaccumulative potential</b>	Does not bioaccumulate.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	No information available.
<b>12.6. Other adverse effects</b>	No information available.

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## 13. Disposal considerations

### 13.1. Waste treatment methods

<b>Waste from residues / unused products</b>	Can be incinerated, when in compliance with local regulations.
<b>Contaminated packaging</b>	Offer rinsed packaging material to local recycling facilities.

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## 14. Transport information

<b>ADR/RID</b>	Proper shipping name BENZENE UN No 1114. Class 3. Packing group II. ADR/RID-Labels 3. Classification code F1. Risk No. 33. Limited quantity 1 L. Tunnel code D/E
<b>IMO</b>	Proper shipping name Benzene UN No 1114. Class 3. Packing group II. ADR/RID-Labels 3. Limited quantity 1 L. EmS F-E, S-D. Marine Pollutant no
<b>ICAO</b>	Proper shipping name Benzene UN No 1114. Class 3. Packing group II. Packing instruction (passenger aircraft): 353 (5 L). Packing instruction (LQ): Y341 (1 L). Packing instruction (cargo aircraft): 364 (60 L).
<b>Inland navigation ADN</b>	Proper shipping name BENZENE UN No 1114. Class 3. Packing group II. ADN danger 3+N3+CMR.
<b>Further Information</b>	None.



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## 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**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.

**15.2. Chemical safety assessment** Not required.

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## 16. Other information

**Key or legend to abbreviations and acronyms** CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)  
DSD/DPD: Classification according to EU Directives 67/548/EEC or 1999/45/EC  
MAK: Maximale Arbeitsplatzkonzentration.

**Full text of phrases referred to under sections 2 and 3** H225: Highly flammable liquid and vapour.  
H304: May be fatal if swallowed and enters airways.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H372derm: Causes damage to organs through prolonged or repeated exposure in contact with skin.  
H372inh: Causes damage to organs through prolonged or repeated exposure if inhaled.  
H372oral: Causes damage to organs through prolonged or repeated exposure if swallowed.

R11: Highly flammable.  
R36/38: Irritating to eyes and skin.  
R45: May cause cancer.  
R46: May cause heritable genetic damage.  
R48/23/24/25: Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.  
R65: Harmful: may cause lung damage if swallowed.

**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.