

SAFETY DATA SHEET

according to the Global Harmonized System

Nitrobenzene-d5

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

Use of the Substance/Preparation	Solvent for NMR spectroscopy Chemical intermediate
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	21.05.2010
Version	GHS 1

2. Hazards identification



DANGER!

Specific target organ toxicity (repeated exposure, inhalation), Cat. 1
Acute toxicity, oral, Cat. 3
Acute toxicity, inhal., Vapours, Cat. 3
Acute toxicity, dermal, Cat. 3
Specific target organ toxicity (repeated exposure, dermal), Cat. 1
Hazardous to the aquatic environment, chronic, Cat. 2

3. Composition/information on ingredients

Components		Health hazards	CAS	REACH No.
Nitrobenzene-d5	> 90%	TAlnV3 TADe3 TAOOr3 SREIn1 SREDe1 NChr2	4165-60-0	

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.
Eye contact	If eye irritation persists, consult a specialist. Rinse thoroughly with plenty of water, also under the eyelids.
Ingestion	Immediately give plenty of water (if possible charcoal slurry). Consult a physician for severe cases.

5. Fire-fighting measures

Suitable extinguishing media	Use dry chemical, CO ₂ , water spray or alcohol foam.
Extinguishing media which must not be used for safety reasons	High volume water jet.
Specific hazards	Burning produces irritant fumes.
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. Local authorities should be advised if significant spillages cannot be contained.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

7. Handling and storage

Handling	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. Contaminated work clothing should not be allowed out of the workplace.
Personal protection equipment	
Respiratory protection	In the case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection	Gloves made of VITON.
Eye protection	Safety glasses with side-shields conforming to EN 166. Eye wash bottle with pure water.
Skin and body protection	Wear as appropriate: Impervious clothing.

9. Physical and chemical properties

Form	Liquid.
Colour	Light yellow.
Odour	Slight nitric.
Physical and chemical properties	Flash point: 87 °C. Water solubility: 1.9 g/l. Boiling point/range: 211 °C. Melting point/range: 6 °C. Vapour pressure: 20 Pa (20 °C). Explosion limits (lower): 1.8 %. Explosion limits (upper): 40 %.

10. Stability and reactivity

Stability	No decomposition if used as directed.
Conditions to avoid	Heating in air. Heating can release hazardous gases.
Hazardous decomposition products	None under normal use.

11. Toxicological information

Acute toxicity	Nitrobenzene-D5 LD50/dermal/rat = 2100 mg/kg. LD50/oral/rat = 640 mg/kg.
Local effects	Harmful if swallowed. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Toxic by inhalation, in contact with skin and if swallowed.
Long term toxicity	Chronic exposure may cause permanent damage of health. Symptoms may be delayed.
Sensitization	None.
Further information	Use of alcoholic beverages may enhance toxic effects.

12. Ecological information

Ecotoxicity	EC50/24h/daphnia = 60 mg/l. LC50/48h/golden orfe = 60 mg/l. Waste water from subsequent processing should be given appropriate treatment in line with local regulations.
Persistence / degradability	Not readily biodegradable.
Bioaccumulative potential	Accumulation in aquatic organisms is unlikely.

13. Disposal considerations

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.
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14. Transport information

ADR/RID	Proper shipping name NITROBENZENE UN No 1662. Class 6.1. Packing group II. ADR/RID-Labels 6.1+ENV. Classification code T1. Risk No. 60. Limited quantity LQ17. Tunnel code D/E
IMO	Proper shipping name Nitrobenzene UN No 1662. Class 6.1. Packing group II. ADR/RID-Labels 6.1+ENV. Limited quantity 100ml. EmS F-A, S-A.
ICAO	Proper shipping name Nitrobenzene UN No 1662. Class 6.1. Packing group II. Packing instruction (passenger aircraft): 609 (5 L). Packing instruction (LQ): Y609 (1 L). Packing instruction (cargo aircraft): 611 (60 L).

15. Regulatory information

GHS-Classification	
Signal Word	DANGER!
Hazard Statements	Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes damage to organs through prolonged or repeated exposure in contact with skin. Causes damage to organs through prolonged or repeated exposure if inhaled. Toxic to aquatic life with long lasting effects.
Precautionary Statements	Wear protective gloves/clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid release to the environment. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Collect spillage. Call a POISON CENTER or doctor/physician. Dispose of contents/container to an approved waste disposal plant. Do not eat, drink or smoke when using this product. Remove/Take off immediately all contaminated clothing. Store in a well-ventilated place. Keep container tightly closed.
GHS product identifier	Nitrobenzene-d5, CAS-No. 4165-60-0

EC-Symbol(s)	T - Toxic. N - Dangerous for the environment.
R-phrase(s)	R23/24/25: Toxic by inhalation, in contact with skin and if swallowed. R40: Limited evidence of a carcinogenic effect. R48/23/24: Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62: Possible risk of impaired fertility.
S-phrase(s)	S28: After contact with skin, wash immediately with plenty of soap and water. S36/37: Wear suitable protective clothing and gloves. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61: Avoid release to the environment. Refer to special instructions / safety data sheets.
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 TAlnV3: Acute toxicity, inhal., Vapours, Cat. 3 SREIn1: Specific target organ toxicity (repeated exposure, inhalation), Cat. 1 SREDe1: Specific target organ toxicity (repeated exposure, dermal), Cat. 1 NChr2: Hazardous to the aquatic environment, chronic, Cat. 2
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.