

SAFETY DATA SHEET

according to the Global Harmonized System

Ammonia-d3 in D2O

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

Use of the Substance/Preparation	Solvent for NMR spectroscopy Chemical reaction medium
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!

Skin corrosion/irritation, Cat. 1B
Hazardous to the aquatic environment, acute, Cat. 1

3. Composition/information on ingredients

Components		Health hazards	CAS	REACH No.
Ammonia-d3	20% - 25%	CSk1B NAcut1	13550-49-7	
Deuterium oxide	50% - 75%		7789-20-0	

4. First aid measures

Inhalation	Move to fresh air. Consult a physician after significant exposure.
Skin contact	Wash off immediately with plenty of water. Remove contaminated clothes and shoes. 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.
Ingestion	Prevent vomiting if possible. Consult a physician for severe cases. If conscious, drink plenty of water.
Notes to physician	Later control for pneumonia and lung oedema.

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	The product is not flammable.
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	Do not breathe vapours/dust.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods for 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). After cleaning, flush away traces with water.

7. Handling and storage

Handling	Plan first aid action before beginning work with this product. Wear personal protective equipment.
Storage	Store at room temperature in the original container.

8. Exposure controls / personal protection

Exposure limit(s)	MAK (Maximale Arbeitsplatzkonzentration): 25 ppm.
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 Nitril.
Eye protection	Safety glasses with side-shields conforming to EN 166.
Skin and body protection	Wear as appropriate: Impervious clothing.

9. Physical and chemical properties

Form	Liquid.
Colour	Colourless.
Odour	Ammoniacal.
Physical and chemical properties	pH: > 11 . Water solubility: completely soluble

10. Stability and reactivity

Stability	No decomposition if used as directed.
Conditions to avoid	Burning produces obnoxious and toxic fumes. Heating in air.
Materials to avoid	Corrodes base metals. Strong acids.
Hazardous decomposition products	None under normal use.

11. Toxicological information

Acute toxicity	Deuterium oxide None. Ammonia-d3 LD50/oral/rat = 350 mg/kg.
Local effects	Extremely corrosive and destructive to tissue. Harmful if swallowed. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Long term toxicity	Chronic exposure may cause permanent damage of health.

Sensitization	None.
Further information	Health injuries are not known or expected under normal use.

12. Ecological information

Ecotoxicity	Deuterium oxide None. Ammonia-d3 LC50/24h/daphnia = 32 mg/l. Acute fish toxicity = 1.25 mg/l. May change pH of waters.
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.
Contaminated packaging	Empty containers can be landfilled, when in compliance with local regulations.

14. Transport information

ADR/RID	Proper shipping name AMMONIA SOLUTION UN No 2672. Class 8. Packing group III. ADR/RID-Labels 8+ENV. Classification code C5. Risk No. 80. Limited quantity LQ7. Tunnel code E
IMO	Proper shipping name Ammonia solution relative density between 0.880 and 0.957 at 15°C in water, with more than 10% but not more than 35% ammonia by mass UN No 2672. Class 8. Packing group III. ADR/RID-Labels 8+ENV. Limited quantity 5 L. EmS F-A, S-B.

ICAO	<p>Proper shipping name Ammonia solution relative density (specific gravity) between 0.880 and 0.957 at 15°C in water, with more than 10% but not more than 35% ammonia</p> <p>UN No 2672.</p> <p>Class 8.</p> <p>Packing group III.</p> <p>Packing instruction (passenger aircraft): 819 (5 L).</p> <p>Packing instruction (LQ): Y819 (1 L).</p> <p>Packing instruction (cargo aircraft): 813 (60 L).</p>
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15. Regulatory information

GHS-Classification	
Signal Word	DANGER!
Hazard Statements	<p>Causes severe skin burns and eye damage.</p> <p>Very toxic to aquatic life.</p>
Precautionary Statements	<p>Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>Wash skin thoroughly after handling.</p> <p>Avoid release to the environment.</p> <p>Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>IF SWALLOWED: rinse mouth. Do NOT induce vomiting.</p> <p>IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.</p> <p>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.</p> <p>Wash contaminated clothing before reuse.</p> <p>Collect spillage.</p> <p>Store locked up.</p>
GHS product identifier	<p>Dispose of contents/container to an approved waste disposal plant.</p> <p>Ammonia-d3, CAS-No. 13550-49-7, EC-No. 236-926-9</p> <p>Deuterium oxide, CAS-No. 7789-20-0, EC-No. 232-148-9</p>
EC-Symbol(s)	<p>C - Corrosive.</p> <p>N - Dangerous for the environment.</p>
R-phrase(s)	<p>R34: Causes burns.</p> <p>R50: Very toxic to aquatic organisms.</p>
S-phrase(s)	<p>S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</p> <p>S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</p> <p>S61: Avoid release to the environment. Refer to special instructions / safety data sheets.</p> <p>S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.</p>
Hazardous components which must be listed on the label	Ammonia-d3, CAS-No. 13550-49-7, EC-No. 236-926-9

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**

Solvent for NMR spectroscopy For research use only.

GHS-Classification

CSk1B: Skin corrosion/irritation, Cat. 1B
NAcut1: Hazardous to the aquatic environment, acute, 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.