

# SAFETY DATA SHEET

according to the Global Harmonized System

## Nitric acid in deuterium oxide

### 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 <a href="mailto:admin@armar.ch">admin@armar.ch</a>
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. 1A  
Serious eye damage/eye irritation, Cat. 1

### 3. Composition/information on ingredients

Components		Health hazards	CAS	REACH No.
Nitric acid-d	30% - 50%	CSk1A	13587-52-5	
Deuterium oxide	30% - 50%		7789-20-0	

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## **4. First aid measures**

<b>Inhalation</b>	Move to fresh air.
<b>Skin contact</b>	Wash off immediately with plenty of water. Consult a physician for severe cases.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Protect unharmed eye.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Prevent vomiting if possible. Consult a physician for severe cases.

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## **5. Fire-fighting measures**

<b>Suitable extinguishing media</b>	Use dry chemical, CO <sub>2</sub> , water spray or alcohol foam.
<b>Extinguishing media which must not be used for safety reasons</b>	High volume water jet.
<b>Specific hazards</b>	The product is not flammable.
<b>Special protective equipment for firefighters</b>	Standard procedure for chemical fires.
<b>Specific methods</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## **6. Accidental release measures**

<b>Environmental precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for cleaning up</b>	Clean up promptly by sweeping or vacuum. Soak up with acid binder After cleaning, flush away traces with water.

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## **7. Handling and storage**

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

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## **8. Exposure controls / personal protection**

<b>Occupational exposure controls</b>	Avoid contact with skin, eyes and clothing.
<b>Personal protection equipment</b>	

<b>Respiratory protection</b>	No special protective equipment required.
<b>Hand protection</b>	Gloves made of latex.
<b>Eye protection</b>	Safety glasses with side-shields conforming to EN 166.
<b>Skin and body protection</b>	Wear as appropriate: Impervious clothing.

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## ***9. Physical and chemical properties***

<b>Form</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Stinging.
<b>Physical and chemical properties</b>	pH: 1 ( 2 % solution). Water solubility: completely soluble Melting point/range: -20 °C. Boiling point/range: 120 °C. Density: 1.37 g/ml (20 °C). Vapour pressure: 300 Pa (20 °C).

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## ***10. Stability and reactivity***

<b>Stability</b>	No decomposition if used as directed.
<b>Conditions to avoid</b>	Burning produces obnoxious and toxic fumes.
<b>Materials to avoid</b>	Corrodes base metals.
<b>Hazardous decomposition products</b>	None under normal use.

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## ***11. Toxicological information***

<b>Acute toxicity</b>	<b>Deuterium oxide</b> None.
<b>Local effects</b>	Causes severe burns. Extremely corrosive and destructive to tissue.
<b>Long term toxicity</b>	Negligible.
<b>Sensitization</b>	None.

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## 12. Ecological information

<b>Ecotoxicity</b>	May change pH of waters. EC50/48h/daphnia = 100 mg/l. LC50/96h/fish = 25 mg/l. <b>Deuterium oxide</b> None.
<b>Bioaccumulative potential</b>	Does not bioaccumulate.

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## 13. Disposal considerations

<b>Waste from residues / unused products</b>	Can be used without re-conditioning. Dispose of wastes in an approved waste disposal facility.
<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 NITRIC ACID UN No 2031. Class 8. Packing group II. ADR/RID-Labels 8. Classification code CO1. Risk No. 80. Limited quantity LQ22. Tunnel code E
<b>IMO</b>	Proper shipping name Nitric acid other than red fuming, with not more than 65 % nitric acid UN No 2031. Class 8. Packing group II. ADR/RID-Labels 8. Limited quantity 1 L. EmS F-A, S-B.
<b>ICAO</b>	Proper shipping name Nitric acid other than red fuming, with 20% or less nitric acid UN No 2031. Class 8. Packing group II. Packing instruction (passenger aircraft): 807 (1 L). Packing instruction (LQ): Y807 (0.5 L). Packing instruction (cargo aircraft): 813 (30 L).

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## 15. Regulatory information

<b>GHS-Classification</b>	
<b>Signal Word</b>	DANGER!
<b>Hazard Statements</b>	Causes severe skin burns and eye damage.

<b>Precautionary Statements</b>	Do not breathe dust/fume/gas/mist/vapours/spray. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. 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. Store locked up. Dispose of contents/container to an approved waste disposal plant.
<b>GHS product identifier</b>	Nitric acid-d , CAS-No. 13587-52-5, EC-No. 237-024-8 Deuterium oxide, CAS-No. 7789-20-0, EC-No. 232-148-9
<b>EC-Symbol(s)</b>	C - Corrosive.
<b>R-phrases(s)</b>	R35: Causes severe burns.
<b>S-phrases(s)</b>	S17: Keep away from combustible material. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.
<b>Hazardous components which must be listed on the label</b>	Nitric acid-d , CAS-No. 13587-52-5, EC-No. 237-024-8
<b>Regulatory Information</b>	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.

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## 16. Other information

<b>Recommended use</b>	Solvent for NMR spectroscopy Chemical reaction medium. For research use only.
<b>GHS-Classification</b>	CSk1A: Skin corrosion/irritation, Cat. 1A
<b>Further information</b>	Take notice of the directions of use on the label.
<b>Disclaimer</b>	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.