

SAFETY DATA SHEET

according to the Global Harmonized System

Ammonia-d3

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

Use of the Substance/Preparation	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	22.04.2010
Version	GHS 1

2. Hazards identification



DANGER!

Skin corrosion/irritation, Cat. 1B
Acute toxicity, inhal., Gases, Cat. 3
Hazardous to the aquatic environment, acute, Cat. 1

3. Composition/information on ingredients

Components		Health hazards	CAS	REACH No.
Ammonia-d3	> 90%	TAInG3 CSk1B NAcut1	13550-49-7	

4. First aid measures

Inhalation	Move to fresh air. Consult a physician after significant exposure.
Skin contact	Remove contaminated clothes and shoes. Wash off immediately with soap and plenty of water. 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	Consult a physician for severe cases. Immediately give plenty of water (if possible charcoal slurry).
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	Solvents may produce excessive pressure under fire-conditions. Sealed containers may rupture and ignite. Cool containers / tanks with water spray. 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. Do not use a solid water stream as it may scatter and spread fire.

6. Accidental release measures

Personal precautions	Do not breathe vapours/dust. 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	After cleaning, flush away traces with water. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Handling	Plan first aid action before beginning work with this product. 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

Exposure limit(s)	Exposure limit(s): 25 ppm.
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. Suitable respiratory equipment:
Hand protection	Gloves made of Nitril.
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. Solvent-resistant apron and boots.

9. Physical and chemical properties

Form	Gaseous.
Colour	Colourless.
Odour	Ammoniacal.
Physical and chemical properties	pH: > 11 . Flash point: 132 °C. Water solubility: soluble Melting point/range: -78 °C. Boiling point/range: -33 °C.

10. Stability and reactivity

Stability	No decomposition if used as directed.
Conditions to avoid	Burning produces obnoxious and toxic fumes. Heating in air. Heating can release hazardous gases.
Materials to avoid	Corrodes base metals. Strong acids. Incompatible with strong bases and oxidizing agents.
Hazardous decomposition products	None under normal use.

11. Toxicological information

Acute toxicity	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. Toxic by inhalation.
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	LC50/24h/daphnia = 32 mg/l. Acute fish toxicity = 1.25 mg/l. May change pH of waters. Waste water from subsequent processing should be given appropriate treatment in line with local regulations.
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. Dispose of wastes in an approved waste disposal facility.
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14. Transport information

ADR/RID	Proper shipping name AMMONIA, ANHYDROUS UN No 1005. Class 2. ADR/RID-Labels 2.3+8+ENV. Classification code 2TC. Risk No. 268. Limited quantity LQ0. Tunnel code C/D
IMO	Proper shipping name Ammonia, anhydrous UN No 1005. Class 2.3. Packing group -. ADR/RID-Labels 2.3+8+ENV. Limited quantity Keine. EmS F-C, S-U.
ICAO	Proper shipping name Ammonia, anhydrous UN No 1005. Class 2.3. Packing instruction (passenger aircraft): Forbidden. Packing instruction (LQ): -. Packing instruction (cargo aircraft): 200 (25 kg).

15. Regulatory information

GHS-Classification	
Signal Word	DANGER!
Hazard Statements	Causes severe skin burns and eye damage. Toxic if inhaled. Very toxic to aquatic life.
Precautionary Statements	Do not breathe dust/fume/gas/mist/vapours/spray. Avoid release to the environment. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Wear protective gloves/protective clothing/eye protection/face protection. Collect spillage. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents/container to an approved waste disposal plant. Store in a well-ventilated place. Keep container tightly closed. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
GHS product identifier	Ammonia-d3, CAS-No. 13550-49-7, EC-No. 236-926-9

EC-Symbol(s)	T - Toxic. N - Dangerous for the environment.
R-phrases(s)	R10: Flammable. R23: Toxic by inhalation. R34: Causes burns. R50: Very toxic to aquatic organisms.
S-phrases(s)	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S36/37/39: Wear suitable protective clothing, gloves and eye / face protection. 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.
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	Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use.
GHS-Classification	TAInG3: Acute toxicity, inhal., Gases, Cat. 3 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.