

SAFETY DATA SHEET

according to the Global Harmonized System

Dioxane-d8

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

Use of the Substance/Preparation	Solvent for NMR spectroscopy
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!

Specific target organ toxicity (single exposure, inhalation), Cat. 3
Serious eye damage/eye irritation, Cat. 2
Flammable liquids, Cat. 2
{EUH019} May form explosive peroxides.
{EUH066} Repeated exposure may cause skin dryness or cracking.

3. Composition/information on ingredients

Components		Health hazards	CAS	REACH No.
Dioxane-d8	> 90%	CEy2 SSEIn3 Fliq2 EUH019 EUH066	17647-74-4	

4. First aid measures

Inhalation	Move to fresh air. Consult a physician after significant exposure.
Skin contact	Wash with water and soap as a precaution.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Consult a physician if necessary.

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

6. Accidental release measures

Personal precautions	Remove all sources of ignition. Pay attention to flashback.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Clean up promptly by sweeping or vacuum. After cleaning, flush away traces with water.

7. Handling and storage

Handling	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.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure limit(s)	Exposure limit(s): 20 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.
Skin and body protection	Wear as appropriate: Solvent-resistant apron and boots.

9. Physical and chemical properties

Form	Liquid.
Colour	Colourless.
Odour	Sweet.
Physical and chemical properties	Flash point: 12 °C. Water solubility: completely soluble Fat solubility: completely soluble Melting point/range: 11 °C. Boiling point/range: 100 °C. Density: 1.13 g/ml. Vapour pressure: 4130 Pa (20 °C). Explosion limits (lower): 1.9 %. Explosion limits (upper): 22.5 %.

10. Stability and reactivity

Stability	No decomposition if used as directed.
Conditions to avoid	Do not freeze. Heating in air.
Materials to avoid	Incompatible with strong bases and oxidizing agents.
Hazardous decomposition products	Peroxides.

11. Toxicological information

Acute toxicity	LD50/oral/rat > 200 mg/kg. LD50/dermal/rabbit > 2000 mg/kg. LC50/inhalation/1h/rat = 20 mg/kg.
Local effects	Inhalation of mist causes irritation of respiratory system. Irritating to eyes and respiratory system. May cause skin irritation with susceptible persons. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Long term toxicity	Negligible.
Sensitization	None.

12. Ecological information

Ecotoxicity	EC50/48h/daphnia > 1000 mg/l . LC50/48h/golden orfe = 8450 mg/l.
Persistence / degradability	Readily biodegradable.
Bioaccumulative potential	Does not bioaccumulate.

13. Disposal considerations

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

14. Transport information

ADR/RID	Proper shipping name DIOXANE UN No 1165. Class 3. Packing group II. ADR/RID-Labels 3. Classification code F1. Risk No. 33. Limited quantity LQ4. Tunnel code D/E
IMO	Proper shipping name Dioxane UN No 1165. Class 3. Packing group II. ADR/RID-Labels 3. Limited quantity 1 L. EmS F-E, S-D.

ICAO

Proper shipping name Dioxane
UN No 1165.
Class 3.
Packing group II.
Packing instruction (passenger aircraft): 305 (5 L).
Packing instruction (LQ): Y305 (1 L).
Packing instruction (cargo aircraft): 307 (60 L).

15. Regulatory information

GHS-Classification**Signal Word**

DANGER!

Hazard Statements

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
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. Call a POISON CENTER or doctor/physician if you feel unwell. If eye irritation persists: Get medical advice/attention.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container to an approved waste disposal plant.
Dioxane-d8, CAS-No. 17647-74-4, EC-No. 241-628-7

GHS product identifier**EC-Symbol(s)**

F - Highly flammable.
Xn - Harmful.

R-phrase(s)

R11: Highly flammable.
R19: May form explosive peroxides.
R36/37: Irritating to eyes and respiratory system.
R40: Limited evidence of a carcinogenic effect.
R66: Repeated exposure may cause skin dryness or cracking.

S-phrase(s)

S9: Keep container in a well-ventilated place.
S16: Keep away from sources of ignition - No smoking.
S36/37: Wear suitable protective clothing and gloves.
S46: If swallowed, seek medical advice immediately and show this container or label.

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
GHS-Classification	CEy2: Serious eye damage/eye irritation, Cat. 2 SSEIn3: Specific target organ toxicity (single exposure, inhalation), Cat. 3 Fliq2: Flammable liquids, 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.