

SAFETY DATA SHEET

according to the Global Harmonized System

Furan-d4

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	22.04.2010
Version	GHS 1

2. Hazards identification



DANGER!

Skin corrosion/irritation, Cat. 2
Acute toxicity, oral, Cat. 4
Specific target organ toxicity (repeated exposure, oral), Cat. 2
Acute toxicity, inhal., Vapours, Cat. 4
Germ cell mutagenicity, Cat. 2
Carcinogenicity, Cat. 2
Flammable liquids, Cat. 1
Hazardous to the aquatic environment, chronic, Cat. 3
{EUH019} May form explosive peroxides.

3. Composition/information on ingredients

Components		Health hazards	CAS	REACH No.
Furan-d4	> 90%	TAInV4 TAO _r 4 CSk2 SREOr2 Carc2 Muta2 NChr3 Fliq1 EUH019	6142-90-1	

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	If conscious, drink plenty of water. Consult a physician if necessary. Do not induce vomiting.

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. Evaporates.

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

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	Aromatic.
Physical and chemical properties	Flash point: -36 °C. Boiling point/range: 32 °C. Density: 1 g/ml.

10. Stability and reactivity

Stability	No decomposition if used as directed.
Conditions to avoid	Heating in air.
Materials to avoid	Incompatible with strong bases and oxidizing agents.
Hazardous decomposition products	None under normal use.

11. Toxicological information

Local effects	Irritating to skin. Harmful by inhalation and if swallowed. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Harmful if swallowed.
Long term toxicity	Chronic exposure may cause permanent damage of health.
Sensitization	None.
Human experience	Excessive exposures may affect human health, as follows: Cancer..

12. Ecological information

Bioaccumulative potential	Accumulation in aquatic organisms is unlikely.
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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 FURAN UN No 2389. Class 3. Packing group I. ADR/RID-Labels 3. Classification code F1. Risk No. 33. Limited quantity LQ3. Tunnel code D/E
IMO	Proper shipping name Furan UN No 2389. Class 3. Packing group I. ADR/RID-Labels 3. Limited quantity Keine. EmS F-E, S-D.

ICAO

Proper shipping name Furan
UN No 2389.
Class 3.
Packing instruction (passenger aircraft): Forbidden.
Packing instruction (LQ): –.
Packing instruction (cargo aircraft): Forbidden.

15. Regulatory information

GHS-Classification**Signal Word****Hazard Statements**

DANGER!

Extremely flammable liquid and vapour.

Harmful if swallowed.

Causes skin irritation.

Harmful if inhaled.

Suspected of causing genetic defects.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure if swallowed.

Harmful to aquatic life with long lasting effects.

Precautionary Statements

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Wear protective gloves/protective clothing/eye protection/face protection.

Do not breathe dust/fume/gas/mist/vapours/spray.

Avoid release to the environment.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Wash skin thoroughly after handling.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Get medical advice/attention if you feel unwell.

Dispose of contents/container to an approved waste disposal plant.

If skin irritation occurs: Get medical advice/attention.

Take precautionary measures against static discharge.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store in a well-ventilated place. Keep cool.

Keep container tightly closed.

GHS product identifier

Furan-d4, CAS-No. 6142-90-1

EC-Symbol(s)

F+ - Extremely flammable.

T - Toxic.

R-phrases(s)

R45: May cause cancer.

R12: Extremely flammable.

R19: May form explosive peroxides.

R20/22: Harmful by inhalation and if swallowed.

R38: Irritating to skin.

R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R68: Possible risk of irreversible effects.

S-phrases(s)	S53: Avoid exposure - obtain special instructions before use. 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	Solvent for NMR spectroscopy Chemical intermediate.
GHS-Classification	TAOr4: Acute toxicity, oral, Cat. 4 TAInV4: Acute toxicity, inhal., Vapours, Cat. 4 CSk2: Skin corrosion/irritation, Cat. 2 Muta2: Germ cell mutagenicity, Cat. 2 Carc2: Carcinogenicity, Cat. 2 SREOr2: Specific target organ toxicity (repeated exposure, oral), Cat. 2 NChr3: Hazardous to the aquatic environment, chronic, Cat. 3 Fliq1: Flammable liquids, 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.