

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
(amended by Regulation (EU) 2015/830)

Tetrahydrofuran-d8

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Tetrahydrofuran-d8
CAS-No.	1693-74-9
EC-No.	216-898-4
Product code	None.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	Solvent for NMR spectroscopy
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1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	Zeochem AG, www.zeochem.ch Joweid 5, 8630 Rüti, Schweiz Tel.: +41 44 922 93 93 E-Mail: info@zeochem.ch
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1.4. Emergency telephone number	Tox-Zentrum Zürich : 145 / +41 44 251 51 51 [24h/7d]
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Issuing date	05.10.2018
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Version	GHS 5 (Previous versions: GHS 4)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008

Serious eye damage/eye irritation, Cat. 2, H319
Carcinogenicity, Cat. 2, H351
Specific target organ toxicity (single exposure, inhalation), Cat. 3, H335
Flammable liquids, Cat. 2, H225

Additional information

For the full text of the phrases mentioned in this Section, see Section 16.

2.2. Label elements



Signal Word

Danger

Hazard Statements

H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H351: Suspected of causing cancer.

Precautionary statements

P210b: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243: Take precautionary measures against static discharge.
P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264a: Wash skin thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER/doctor if you feel unwell.
P337+P313: If eye irritation persists: Get medical advice/ attention.
P403+P235: Store in a well-ventilated place. Keep cool.
P501: Dispose of contents/ container to an approved waste disposal plant.

Supplemental information

None.

Product identifier

Tetrahydrofuran-d8, CAS-No. 1693-74-9, EC-No. 216-898-4

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

Components		Product identifier
Tetrahydrofuran-d8	> 90%	CAS-No.: 1693-74-9 EC-No.: 216-898-4

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities None known.

SECTION 4: First aid measures

4.1. Description of 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.

4.2. Most important symptoms and effects, both acute and delayed None known.

4.3. Indication of any immediate medical attention and special treatment needed None known.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use dry chemical, CO₂, water spray or alcohol foam.

Extinguishing media which must not be used for safety reasons High volume water jet.

5.2. Special hazards arising from the substance or mixture Solvents may produce excessive pressure under fire-conditions. Sealed containers may rupture and ignite. Cool containers / tanks with water spray. Burning produces irritant fumes.

5.3. Advice for firefighters

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	Remove all sources of ignition. Pay attention to flashback.
Advice for emergency responders	Handle in accordance with good industrial hygiene and safety practice.

6.2. Environmental precautions Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and 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.

SECTION 7: Handling and storage

7.1. Precautions for safe 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.

7.2. Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s) No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) MAK (Maximale Arbeitsplatzkonzentration): 50 ppm.

8.2. Exposure controls

Appropriate engineering controls Avoid contact with skin, eyes and clothing.

Personal protection equipment

Respiratory protection In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hand protection Solvent-resistant gloves (butyl-rubber)

Eye protection Safety glasses.

Skin and body protection Wear as appropriate: Solvent-resistant apron and boots.

Thermal hazards

No special measures required.

Environmental exposure controls No special measures required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Ether-like.
Odour Threshold	Not determined.
pH:	n.a.
Melting point/range:	-108°C
Boiling point/range:	64°C
Flash point:	-20°C
Evaporation Rate:	Not determined.
Flammability:	Not determined.
Explosion limits:	12.4% / 1.5%
Vapour pressure:	173 mbar (20°C)
Vapor density:	2.5
Relative density:	0.99 g/ml
Water solubility:	completely soluble
Partition coefficient (n-octanol/water):	0.46
Autoignition temperature:	230°C
Decomposition temperature:	Not determined.
Viscosity:	Not determined.
Explosive properties:	liquid, flammable
Oxidising properties:	None

9.2. Other information

General Product Characteristics No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	May form explosive peroxides.
10.3. Possibility of hazardous reactions	No information available.
10.4. Conditions to avoid	Heating in air.
10.5. Incompatible materials	Incompatible with strong bases and oxidizing agents.
10.6. Hazardous decomposition products	None under normal use.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	LD50/oral/rat = 1650 mg/kg.
Skin corrosion/irritation	No data available.
Serious eye damage/eye irritation	No data available.
Respiratory / Skin Sensitisation	None.
Carcinogenicity	Possible carcinogen.
Germ cell mutagenicity	Animal testing did not show any mutagenic effects.
Reproductive toxicity	Damage to fetus unlikely if the occupational exposure limit values are not exceeded.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.

SECTION 12: Ecological information

12.1. Toxicity	EC50/48h/daphnia = 5930 mg/l. LC50/48h/golden orfe = 2820 mg/l.
12.2. Persistence and degradability	Readily biodegradable.
12.3. Bioaccumulative potential	Does not bioaccumulate.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	No information available.
12.6. Other adverse effects	No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

ADR/RID	UN 2056. Proper shipping name: TETRAHYDROFURAN. Class 3. Packing group II. ADR/RID-Labels 3. Classification code F1. Hazard identification no. 33. Limited quantity 1 L. Excepted quantity E2. Tunnel restriction code D/E
IMDG	UN 2056. Proper shipping name: TETRAHYDROFURAN. Class 3. Packing group II. IMDG-Labels 3. Limited quantity 1 L. Excepted quantity E2. EmS F-E, S-D. Marine pollutant: No.
IATA	UN 2056. Proper shipping name: Tetrahydrofuran. Class 3. Packing group II. IATA label 3. Packing instruction (passenger aircraft): 353 (5 L). Packing instruction (LQ): Y341 (1 L). Packing instruction (cargo aircraft): 364 (60 L).
Inland navigation ADN	UN 2056. Proper shipping name: TETRAHYDROFURAN. Class 3. Packing group II. ADN labels 3. Classification code F1. Limited quantity 1 L. Excepted quantity E2.
Further Information	None.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulatory Information The product is classified and labelled according to Regulation (EC) No. 1272/2008.

15.2. Chemical safety assessment Not required.

SECTION 16: Other information

Key or legend to abbreviations and acronyms CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS)
MAK: Occupational exposure limit.

Full text of phrases referred to under sections 2 and 3 H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H351: Suspected of causing cancer.

Further information Take notice of the directions of use on the label. Modifications in the following chapters since the last version: 2, 15, 16.

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.