

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **Tetrahydrofuran D8 >99.5%**
Product Code D-149
CAS Number 1693-74-9
Other Names
IUPAC
MFCD Number MFCD00044238
EC/EINECS 216-898-4
REACH Number Index-No

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

Research and Development

3. Details of the supplier of the safety data sheet

Fluorochem Ltd
Unit 14, Graphite Way
Hadfield
Derbyshire
SK13 1QH
UK

Telephone: +44(0)1457 860111
Fax: +44(0)1457 892799
Email: sds@fluorochem.co.uk



4. Emergency telephone number

+44(0)7855 268577 -

2. Hazards Identification

1. Classification of the substance or mixture

EUH019		
H225	Flam. Liq. 2	
H319	Eye Irrit. 2	
H335	STOT SE 3	

2. Label elements

Signal Word **Danger**



Hazard Statements

EUH019	May form explosive peroxides.
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

3. Composition / Information on Ingredients

1. Substances

Product Name	Hazards	Concentration
Tetrahydrofuran D8 >99.5%		
CAS Number: 1693-74-9 EC/EINECS: 216-898-4	EUH019, H225, H319, H335 Eye Irrit. 2, Flam. Liq. 2, STOT SE 3	<=100%

4. First Aid Measures

1. Description of first aid measures

<i>Skin Contact</i>	Wash immediately with plenty of soap and water. Remove all contaminated clothes and footwear immediately unless stuck to skin.
<i>Eye Contact</i>	P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313: If eye irritation persists: Get medical advice/attention. Rinse opened eye for several minutes under running water.
<i>Ingestion</i>	Wash out mouth with water.
<i>Inhalation</i>	P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove casualty from exposure ensuring one's own safety whilst doing so. Supply fresh air; consult a doctor in case of complaints.

2. Most important symptoms and effects

There may be irritation and redness.

3. Indication of any immediate medical attention

No additional measures required

5. Firefighting measures

1. Extinguishing Media

<i>Suitable</i>	Suitable extinguishing media for surrounding fire should be used. Carbon dioxide. Dry chemical powder. Alcohol or polymer foam. Halons. Use water spray to cool containers.
<i>Unsuitable</i>	no data

2. Special Hazards arising from the substance or mixture

In combustion toxic fumes may form.

3. Advice for Fire Fighters

Wear self-contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

1. Personal Precautions

Eliminate all sources of ignition.
Do not attempt to take action without suitable protective clothing – see section 8 of SDS.

2. Environmental Precautions

Do not discharge into drains or rivers.
Contain the spillage using bunding.

3. Methods & Materials

Mix with sand or vermiculite.
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

4. Preventing the occurrence of secondary hazards.

No Special Measures Required

7. Handling and Storage

1. Personal Precautions

Safe Handling Ensure there is sufficient ventilation of the area.
P264: Wash hands thoroughly after handling.

Protection against explosions and fires P243: Take precautionary measures against static discharge.

2. Conditions for safe storage, including any incompatibilities

Managing Storage Risks Store in cool, well ventilated area.
Keep away from sources of ignition.
Keep container tightly closed.
Keep away from direct sunlight.

Storage Controls No special requirements

Maintaining Integrity P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233: Keep container tightly closed.

Other advice P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

3. Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8. Exposure Controls/Personal Protection

1. Control Parameters

No Data Available

2. Exposure Controls

General protective and hygiene measures P280: Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands during breaks and at the end of handling the material
Immediately remove any contaminated clothing

Engineering measures P271: Use only outdoors or in a well-ventilated area.

Eye / Face Protection Safety Glasses with side-shields.

Hand protection Protective gloves.

Respiratory protection P260: Do not breathe dust/fume/gas/mist/vapours/spray.
Use breathing protection with high concentrations

Skin protection Handle with gloves.
Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice.
Wash and dry hands.
Protective clothing.

Other personal protection advice no data

9. Physical and Chemical Properties

1. Physical and Chemical Properties

Appearance	Colourless liquid
Odour	Ether-like
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	~106°C
Initial boiling point and boiling range	65°C

Flash point	-17°C
Evaporation rate	No Data Available
Flammability(solid,gas)	No Data Available
Upper/lower flammability or explosive limits	No Data Available
Vapour pressure	20°C @ 173 mbar
Vapour density	No Data Available
Relative density	0.985
Solubility(ies):	Most organic solvents. Miscible in water
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive properties	No Data Available
Oxidising properties	No Data Available

2. Other Information

No additional information available

10. Stability and Reactivity

1. Reactivity

no unusual reactivity

2. Stability

Stable under normal conditions.

3. Possibility of Hazardous Reactions

no hazardous reactions known

4. Conditions to Avoid

Sources of Ignition.
Heat.
Hot Surfaces.
Flames.
Direct Sunlight.

5. Incompatible Materials

Oxidising agents.
Bases.

6. Hazardous Decomposition Products

In combustion emits toxic fumes.

11. Toxicology information

1. Information

<i>Acute Toxicity</i>	lpr (Mus) LD50 1900 mg/kg lpr (Rat) LD50 2900 mg/kg Orl (Rat) LD50 1650 mg/kg
<i>Skin corrosion/irritation</i>	irritant for skin and mucous membranes
<i>Serious eye Damage/irritation</i>	irritant effect
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	Possible carcinogen.
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	

not known

STOT-repeated exposure not known

Aspiration hazard not known

2. Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC,NTP,OSHA or ACGIH

12. Ecological Information

1. Toxicity

not known

2. Persistence and degradability

not known

3. Bio-Accumulative Potential

not known

4. Mobility and Soil

not known

5. Results of PBT & vPvB assessment

not known

6. Other adverse effects

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

13. Disposal Considerations

1. Waste Treatment Methods

Disposal Operations

Disposal of Packaging Disposal must be made according to official regulations.

14. Transport Information

Air (ICAO)

1. **UN Number:** 2056
2. **Shipping Name:** Tetrahydrofuran
3. **Transport hazard class(es):** : 3 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Road (ADR)

1. **UN Number:** 2056
2. **Shipping Name:** TETRAHYDROFURAN
3. **Transport hazard class(es):** : 3 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Sea (IMDG)

1. **UN Number:** 2056
2. **Shipping Name:** Tetrahydrofuran
3. **Transport hazard class(es):** : 3 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:** IBCINS: IBC02

TANKPROV: TP1

15. Safety, health, environmental and national regulations

1. Safety, health, environmental and national regulations:

product is not subject to any additional regulations or provisions

2. Safety Assessment

No Chemical Safety Assessment

16. Other Information

1. Other Information:

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)
RID:Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association
ICAO:International Civil Aviation Organization
ICAO-TI: Technical Instructions by the ICAO
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS:Chemical Abstracts Service

3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.