

Safety Data Sheet

#90027748 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Octylmagnesium Chloride, 1.4M in THF	38841-98-4	C ₈ H ₁₇ ClMg	10	15 Oct 2026

SECTION 1

Identification

1.1 Product identifier

Product name Octylmagnesium Chloride, 1.4M in THF**CAS number** 38841-98-4**EC / EINECS number** *Not applicable***UFI code** HQQX-WETH-KC8T-35JQ**Chemical formula** *Not applicable***Molecular weight** *Not applicable***SMILES** *Not applicable*

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

For research use, laboratory use, manufacture of chemicals. Not for human or veterinary use.

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Flam. Liq. 2, H225
 Pyr. Liq. 1, H250
 Water-react. 1, H260
 Skin Corr. 1B, H314
 Carc. 2, H351
 STOT SE 3, H335

2.2 Label elements



DANGER

CODE	HAZARD STATEMENT
EUH014	Reacts violently with water
EUH019	May form explosive peroxides
H225	Highly flammable liquid and vapour
H250	Catches fire spontaneously if exposed to air
H260	In contact with water releases flammable gases which may ignite spontaneously
H314 (sub cat. 1B)	Causes severe skin burns and eye damage
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
CODE	PRECAUTIONARY STATEMENT
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking
P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire
P280	Wear protective gloves/protective clothing/eye protection/face protection
P302+P334	IF ON SKIN: Immerse in cool water/wrap in wet bandages
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

2.3 Other hazards

Not applicable

SECTION 3

Composition / information on ingredients

3.2 Mixtures

COMPONENT 1

Name	Octylmagnesium Chloride
CAS number	38841-98-4
EC number	254-147-2
Concentration	25-27%
Classification according to Regulation (EC) No 1272/2008	Flam. Liq. 2; H225 Pyr. Liq. 1 or Pyr. Sol. 1; H250 Water-react. 1; H260 Skin Corr. 1; H314b
Hazard statements	EUH014, H225, H250, H260, H314b

COMPONENT 2

Name	Tetrahydrofuran
CAS number	109-99-9
EC number	203-726-8
Concentration	73-75%
Classification according to Regulation (EC) No 1272/2008	Flam. Liq. 2; H225 Acute Tox. 3; H301 Eye Irrit. 2; H319 STOT SE 3; H335 STOT SE 3; H336 Carc. 2; H351
Hazard statements	EUH019, H225, H301, H319, H335, H336, H351
Acute toxicity estimate (ATE)	C ≥ 25 % STOT SE 3 H335, C ≥ 25 % Eye Irrit. 2 H319

SECTION 4**First-aid measures****4.1 Description of first aid measures**

Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
Skin contact	Wash with plenty of water. Continue to rinse for at least 15 minutes and seek medical attention.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.
Ingestion	IF SWALLOWED Do not induce vomiting. Give water to victim to drink (2 glasses at most). Seek medical attention.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

Severe skin burns and eye damage, possible corneal injury; respiratory irritation (cough, shortness of breath); if ingested, drowsiness, headache, dizziness, nausea, vomiting and burns of mouth, throat and GI tract.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Foam, dry powder, carbon dioxide, sand.

Unsuitable extinguishing media Do not use extinguishing media containing water.

5.2 Special hazards arising from the substance or mixture

Highly flammable, pyrophoric in air and reacts violently with water; vapours may flash back, containers may rupture, may form explosive peroxides; emits corrosive vapours and toxic fumes.

Hazardous decomposition products: Carbon / Magnesium oxides, Hydrogen chloride gas

5.3 Advice for firefighters

Evacuate area, fight fire remotely from upwind, cool exposed containers with water spray; wear self-contained breathing apparatus and chemically protective clothing.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. For personal protection, see section 8.

6.2 Environmental precautions

Prevent entry to sewers and public waters, notify authorities if it occurs; prevent contact with water or moist air.

6.3 Methods and material for containment and cleaning up

Cover with non-combustible material such as sand/earth, soak up with inert solids (clay, diatomaceous earth), collect and store separately; do not flush with water.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Provide good ventilation; keep away from ignition sources; use non-sparking tools; handle under inert gas; avoid contact with air and moisture; avoid breathing vapours.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature Ambient

Conditions for safe storage (incompatibilities) Store in a closed container under inert gas in a cool, well-ventilated place away from heat; never allow contact with water; incompatible with oxidizing agents and water.

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits (OEL / WEL) EH40/2005 Work Exposure Limits, Fourth edition. Published 2020
Tetrahydrofuran:

STEL: 100 ppm 15 min
STEL: 300 mg/m³ 15 min
TWA: 50 ppm 8 hr
TWA: 150 mg/m³ 8 hr

DNEC/PNEC data

DNEC (Tetrahydrofuran)
Chronic effects systemic (Dermal): 12.6 mg/kg bw/day
Acute effects local (Inhalation): 300 mg/m³
Acute effects systemic (Inhalation): 96 mg/m³
Chronic effects local (Inhalation): 150 mg/m³
Chronic effects systemic (Inhalation): 72.4 mg/m³

PNEC (Tetrahydrofuran)
Fresh water: 4.32 mg/L
Fresh water sediment: 23.3 mg/kg sediment dw
Water Intermittent: 21.6 mg/L
Microorganisms in sewage treatment: 4.6 mg/L
Soil (Agriculture): 2.13 mg/kg soil dw
Marine water: 0.432 mg/L
Marine water sediment: 2.33 mg/kg sediment dw
Food chain: 67 mg/kg food

8.2 Exposure controls

Eye / face protection	Safety glasses Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Gloves: Butyl Rubber, 0.7mm (480 mins)
Respiratory protection	Self-contained breathing apparatus Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.
Other protection	Emergency eye wash fountains and safety showers should be available; do not eat, drink or smoke during use.
Environmental exposure controls	Avoid release to the environment.

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state	Liquid DERIVED FROM: LITERATURE
Colour	Colourless DERIVED FROM: LITERATURE
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	Not applicable
Boiling point	Not applicable
Flammability	Not applicable
Lower and upper explosion limit	Not applicable
Flash point	-10 °C DERIVED FROM: LITERATURE
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
pH	Not applicable
Acidity	Base DERIVED FROM: LITERATURE
Kinematic viscosity	Not applicable
Solubility	Not applicable
Partition coefficient n-octanol/water (log value)	Not applicable
Vapour pressure	Not applicable

Density (g/mL)	0.929 g/mL DERIVED FROM: LITERATURE
Relative vapour density	Not applicable
Particle characteristics	Not applicable

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

Reacts violently with water

10.2 Chemical stability

Stable under the prescribed storage conditions

10.3 Possibility of hazardous reactions

Reacts violently with water

10.4 Conditions to avoid

Heat, hot surfaces, sparks, open flames and other ignition sources; moisture, water, humidity.

10.5 Incompatible materials

Oxidising agents, water.

10.6 Hazardous decomposition products

See section 5

SECTION 11

Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (LD50 / LC50)	Tetrahydrofuran LD50 (Oral) Rat 1650 mg/kg LC50 (Inhalation) Rat 14.7 mg/l 6h.
Skin corrosion / irritation	Causes severe skin burns and eye damage.
Eye corrosion / irritation	Causes serious eye damage
Respiratory / skin sensitisation	Not classified
Carcinogenicity	Suspected of causing cancer.
Mutagenicity	Not classified
Reproductive toxicity	Not classified
STOT (single / repeated exposure)	Single exposure: may cause respiratory irritation; repeated exposure: not classified.

Aspiration hazardNot classified

11.2 Information on other hazardsNot classified

SECTION 12**Ecological information****12.1 Toxicity***Not applicable*

12.2 Persistence and degradability*Not applicable*

12.3 Bioaccumulative potential*Not applicable*

12.4 Mobility in soil*Not applicable*

12.5 Results of PBT and vPvB assessment*Not applicable*

12.6 Endocrine disrupting properties*See Section 11.2.*

12.7 Other adverse effects*No data available*

SECTION 13**Disposal considerations****13.1 Waste treatment methods**Dispose of in accordance with local/national regulations

SECTION 14**Transport information****14.1 UN number or ID number**UN3399

14.2 UN proper shipping nameORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE

14.3 Transport hazard class(es)

4.3 (3)



14.4 Packing group

I

14.5 Environmental hazards

Not dangerous for the environment; not a marine pollutant.

14.6 Special precautions for user

Special precautions for user ADR classification code FC, special provision 274, limited quantity 1L, excepted quantity E2, Kemler No. 338; IMDG EmS F-E, S-C, stowage category B, SW2.

Transport category 0

Tunnel code (B/E)

Packing instruction (ADR) P402

Packing instruction (IMDG) P402

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15

Regulatory information

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

Substance-specific regulations (e.g. licences) National Regulations:
-Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances
Other regulations, limitations and legal regulations:
-Directive 94/33/EC- The protection of young people at work.

REACH code Y110

ECHA notification *Not applicable*

15.2 Chemical safety assessment

Not applicable

Other information

Revision notes / other information

Replaces version 1.0 published 3/20/2019
Harmonised Entry (Tetrahydrofuran): ATP03 603-025-00-0

Full list of Statements:

EUH014 Reacts violently with water

EUH019 May form explosive peroxides

H225 Highly flammable liquid and vapour

H250 Catches fire spontaneously if exposed to air

H260 In contact with water releases flammable gases which may ignite spontaneously

H314b Causes severe skin burns and eye damage

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H351 Suspected of causing cancer

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.