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Safety Data Sheet

#90026299 · 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
Zinc chloride, 1M in Diethyl ether	**7646-85-7**	**ZnCl2**	**10**	**15 Sep 2026**

SECTION 1

Identification

1.1 Product identifier

Product name	Zinc chloride, 1M in Diethyl ether
CAS number	7646-85-7
EC / EINECS number	231-592-0
UFI code	F9QT-HEP9-SC8P-MTFV
Chemical formula	ZnCl2
Molecular weight	136.30
SMILES	Cl[Zn]Cl

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

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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. 1; H224
Acute Tox. 4; H302
Skin Corr. 1B; H314
STOT SE 3; H335
STOT SE 3; H336
Aquatic Chronic 1; H410

2.2 Label elements

DANGER

CODE	HAZARD STATEMENT
EUH019	May form explosive peroxides
EUH066	Repeated exposure may cause skin dryness or cracking
H224	Extremely flammable liquid and vapour
H302	Harmful if swallowed
H314 (sub cat. 1B)	Causes severe skin burns and eye damage
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H410	Very toxic to aquatic life with long lasting effects

CODE	PRECAUTIONARY STATEMENT
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P302+P352	IF ON SKIN: Wash with soap and water
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 continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing

2.3 Other hazards

Does not contain components considered to have endocrine-disrupting properties. Does not meet PBT or vPvB criteria under REACH Annex XIII.

SECTION 3

Composition / information on ingredients

3.1 Substances

Name	Zinc chloride, 1M in Diethyl ether
CAS number	7646-85-7
EC number	231-592-0
Concentration / purity	c. 16% Zinc chloride (CAS: 7646-85-7): H302, H314b, H400, H410 Harmonised Entry: CLP00 030-003-00-2 c 84% Diethyl ether (CAS: 60-29-7): EUH019, EUH066, H224, H302, H336 Harmonised Entry: CLP00 603-022-00-4 Diethyl ether under investigation by ECHA as a proposed CMR substance
Classification according to Regulation (EC) No 1272/2008	Flam. Liq. 1; H224 Acute Tox. 4; H302 Skin Corr. 1B; H314 STOT SE 3; H335 STOT SE 3; H336 Aquatic Chronic 1; H410
Hazard statements	EUH019, EUH066, H224, H302, H314 (sub cat. 1B), H335, H336, H410
Acute toxicity estimate (ATE)	*No data available*
Impurities / stabilising additives	None

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	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

See Section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Unsuitable extinguishing media	None known

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Zinc oxides, Hydrogen chloride, Carbon oxides and peroxides

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

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

Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up

Absorb spillage with a suitable absorbent material.

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

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs.
Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product.
Remove contaminated clothing and launder thoroughly before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature	2 to 8 °C
Conditions for safe storage (incompatibilities)	Hygroscopic. Store under inert gas. Light sensitive. Air sensitive.

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. Diethyl ether: STEL: 200 ppm 15 min STEL: 620 mg/m3 15 min TWA: 100 ppm 8 hr TWA: 310 mg/m3 8 hr Zinc chloride: STEL: 2 mg/m3 15 min TWA: 1 mg/m3 8 hr
DNEC/PNEC data	DNEC (Diethyl ether): Chronic effects systemic (Dermal)- 44 mg/kg bw/day Acute effects systemic (Inhalation)-616 mg/m3 Chronic effects systemic (Inhalation)- 308 mg/m3 DNEC (Zinc chloride): Chronic effects systemic (Oral)- 0.83 mg/kg bw/day Chronic effects systemic (Dermal)- 8.3 mg/kg bw/day Chronic effects systemic (Inhalation)- 1 mg/m3 PNEC: Fresh water- 2 mg/L (Diethyl ether), 20.6 µg/L (Zinc chloride) Fresh water sediment- 9.14 mg/kg sediment dw (Diethyl ether), 117.8 mg/kg sediment dw (Zinc chloride) Water Intermittent- 1.65 mg/L (Diethyl ether) Microorganisms in sewage treatment- 4.2 mg/L (Diethyl ether), 100 µg/L (Zinc chloride) Soil (Agriculture)- 0.66 mg/kg soil dw (Diethyl ether), 35.6 mg/kg soil dw (Zinc chloride) Marine water- 0.2 mg/L (Diethyl ether), 6.1 µg/L (Zinc chloride) Marine water sediment- 0.914 mg/kg sediment dw (Diethyl ether), 56.5 mg/kg sediment dw (Zinc chloride)

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	Recommended gloves: Viton rubber (fluor rubber), 0.7mm (480mins).
Respiratory protection	Full-face respirator 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	*No data available*
Environmental exposure controls	*No data available*

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	Characteristic DERIVED FROM: LITERATURE
Melting / freezing point	*Not applicable*
Boiling point	*Not applicable*
Flammability	*No data available*
Lower and upper explosion limit	*No data available*
Flash point	-21 °C DERIVED FROM: LITERATURE
Auto-ignition temperature	*Not applicable*
Decomposition temperature	*No data available*
pH	*Not applicable*
Acidity	Acid DERIVED FROM: LITERATURE
Kinematic viscosity	*No data available*
Solubility	*Not applicable*
Partition coefficient n-octanol/water (log value)	*Not applicable*
Vapour pressure	*Not applicable*
Density (g/mL)	0.84 g/mL DERIVED FROM: LITERATURE
Relative vapour density	*No data available*
Particle characteristics	*No data available*

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under the prescribed storage conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid moisture. Air sensitive. Avoid direct sunlight. Heat, sparks, flames.

10.5 Incompatible materials

Strong oxidising agents. Strong acids. Strong bases (alkalis). Metals. Peroxides.

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)	Information on hazard classes as defined in Regulation (EC) No 1272/2008 Diethyl ether LD50 (Oral)- 1215 mg/kg (Rat) Zinc chloride LD50 (Oral)- 350 mg/kg (Rat) Ref: External SDS
Skin corrosion / irritation	Causes severe skin burns and eye damage
Eye corrosion / irritation	Causes serious eye damage
Respiratory / skin sensitisation	Not classified
Carcinogenicity	Not classified
Mutagenicity	Not classified
Reproductive toxicity	Not classified
STOT (single / repeated exposure)	Single exposure: May cause respiratory irritation. Causes drowsiness or dizziness
Aspiration hazard	Not classified

11.2 Information on other hazards

Not classified

SECTION 12

Ecological information

12.1 Toxicity

Zinc chloride:
LC50: 0.4-2.2 mg/L/96h (Cyprinus carpio)
EC50: 0.2 mg/L/48h (Water flea)
EC50: 0.027-0.105 mg/L/72h (Freshwater algae)
Ref: External SDS

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

UN2924

14.2 UN proper shipping name

FLAMMABLE LIQUID, CORROSIVE, N.O.S.

14.3 Transport hazard class(es)

3 (8)

14.4 Packing group

I

14.5 Environmental hazards

Marine pollutant

14.6 Special precautions for user

Special precautions for user	For specific precautions see Section 8 and Section 13
Transport category	1
Tunnel code	(C/E)
Packing instruction (ADR)	P001
Packing instruction (IMDG)	P001

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)	*No data available*
REACH code	Y110
ECHA notification	*Not applicable*

15.2 Chemical safety assessment

Not applicable

SECTION 16

Other information

Revision notes / other information	Replaces previous SDS ver. 1.2, published 23rd January 2019. Hazard classification and labelling according to Regulation (EC) 1272/2008 All eye/face protection should comply with EN ISO 16321-1:2022 Respiratory equipment: Reusable air-purifying respirator (APR) Filter Type: ABEK Standard: EN 14387 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.

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.