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Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 03.09.2025 Version number 2.00 (replaces version 1.00) Revision: 03.09.2025

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

· Product identifier

· Trade name: Zinc sulfate heptahydrate

· Article number: 2738

• **CAS Number:** 7446-20-0 • **EC number:**

231-793-3 • **Index number:** 030-006-00-9

- · **Registration number** The substance is exempt from REACH-registration.
- · Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the mixture Ingredient for pharmaceutical drugs
- · Uses advised against No relevant information available.
- · Details of the supplier of the safety data sheet
- Manufacturer/Supplier:

CAELO

Caesar & Loretz GmbH

Herderstr. 31 D-40721 Hilden GERMANY

· Further information obtainable from:

E-mail: info@caelo.de

Tel.: +49210349940 (during regular opening hours)

• Emergency telephone number: Poison Information Center Bonn Venusberg-Campus 1, 53127 Bonn

Tel: +49 (0) 228-192400

2 Hazards identification

- · Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H302 Harmful if swallowed.

Eye Dam. 1 H318 Causes serious eye damage. Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- · Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

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· Hazard pictograms



- · Signal word Danger
- Hazard statements

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P280 Wear eye protection / face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

- · Other hazards
- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.
- · Determination of endocrine-disrupting properties Not applicable.

3 Composition/information on ingredients

- · Substances
- · CAS No. Description

CAS: 7446-20-0 Zinc sulfate heptahydrate

· Identification number(s) · EC number: 231-793-3 · Index number: 030-006-00-9

4 First aid measures

- · Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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· After swallowing:

Drink plenty of water.

Do not induce vomiting; call for medical help immediately.

Most important symptoms and effects, both acute and delayed

No further relevant information available.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures

- · Extinguishing media
- Suitable extinguishing agents:

All regular extinguishing media can be used.

Use fire extinguishing methods suitable to surrounding conditions.

· Special hazards arising from the substance or mixture

not combustible

In case of fire, the following can be released:

Sulfur oxide (SxOy)

- · Advice for firefighters
- · Protective equipment: In case of fire wear suitable protective clothes and respiratory protection.
- · Additional information

Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Avoid contact with the substance.

· Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

· Methods and material for containment and cleaning up:

Take up dry. Clean up with water.

Dispose contaminated material as waste according to section 13.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Precautions for safe handling Provide suction extractors if dust is formed.
- · Information about fire and explosion protection: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).

· Information about storage in one common storage facility: Not required.

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- · Further information about storage conditions: No further information
- · Storage class: TRHS 510: 13 non-combustible solids
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Control parameters
- Ingredients with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists valid during the making were used as basis.
- · Exposure controls
- · Appropriate engineering controls No further data; see section 7.
- · Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- Respiratory protection: Dust protection mask.
- Hand protection Protective gloves
- Material of gloves

Rubber gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye/face protection Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

Physical state
Colour:
Odour:
Odourless
Odour threshold:
Not determined.

· Melting point/freezing point: 100 °C

· Boiling point or initial boiling point and boiling

range Undetermined.

· Flammability Product is not flammable.

· Lower and upper explosion limit

Lower: Not determined.
 Upper: Not determined.
 Flash point: Not applicable.
 Decomposition temperature: Not determined.

· pH (50 g/l) at 20 °C 4.4–5.6

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· Viscosity:

Kinematic viscosityDynamic:Not applicable.Not applicable.

· Solubility

• water at 20 °C: 965 g/l

Partition coefficient n-octanol/water (log value)
 Vapour pressure:
 Not determined.
 Not applicable.

Density and/or relative density

Density at 20 °C:

Relative density

Bulk density:

Vapour density

Particle characteristics

1.957 g/cm³

Not determined.

1,100 kg/m³

Not applicable.

Not determined

· Other information

· Appearance:

· Form: Solid

· Important information on protection of health and environment, and on safety.

Ignition temperature:

• Explosive properties: Product does not present an explosion hazard.

Void

Not determined.

· Change in condition

• Evaporation rate Not applicable.

Information with regard to physical hazard

classes

· Explosives Void Void

· Flammable gases Void Void

· Aerosols Void

Void · Oxidising gases Void

· Gases under pressure Void

· Flammable liquids Void

Void
Flammable solids
Void

Void Void

· Self-reactive substances and mixtures Void Void

Pyrophoric liquidsPyrophoric solidsVoidVoid

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· Self-heating substances and mixtures Void Void · Substances and mixtures, which emit flammable gases in contact with water Void Void · Oxidising liquids Void Void Void Oxidising solids Void Void Organic peroxides Void Void Corrosive to metals

10 Stability and reactivity

Desensitised explosives

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: To avoid thermal decomposition do not overheat.

Void

Void Void

- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products:

Sulphur oxides (SOx)

Toxic metal oxide smoke

11 Toxicological information

- Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity Harmful if swallowed.
- · LD/LC50 values relevant for classification:

Oral LD50 2,150 mg/kg (mouse)

2,200 mg/kg (rat)

- · Primary irritant effect:
- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Causes serious eye damage.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · Information on other hazards
- · Endocrine disrupting properties

On the basis of the available data, the substance does not meet the criteria for the identification of substances having properties of interference with the endocrine system, in accordance with Article 59,

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paragraph 1 of the REACH Regulation and the criteria established in the Delegated Regulation (EU) 2017 / 2100 of the Commission or in Commission Regulation (EU) 2018/605.

12 Ecological information

- · Toxicity
- · Aquatic toxicity:

LC50 1.9 mg/L /96h (fish: oncorhynchus mykiss)

- Persistence and degradability No further relevant information available.
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Endocrine disrupting properties

Based on the available data, the substance does not meet the criteria for the identification of substances with properties affecting the endocrine system according to Article 59(1) of the REACH Regulation and the criteria of the Commission Delegated Regulation (EU) 2017/2100 or in the Commission Regulation (EU) 2018/605.

The product does not contain substances with endocrine disrupting properties.

- Other adverse effects
- · Remark: Very toxic for fish
- Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

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

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

13 Disposal considerations

- · Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- Recommendation: Disposal must be made according to local regulations.

14 Transport information

- · UN number or ID number
- · ADR, IMDG, IATA
- · UN proper shipping name

· ADR

UN3077

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulfate heptahydrate)

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· IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE,

SOLID, N.O.S. (Zinc sulfate heptahydrate)

·IATA Environmentally hazardous substance, solid, n.o.s. (Zinc

sulfate heptahydrate)

Transport hazard class(es)

· ADR, IMDG, IATA

· Class 9 Miscellaneous dangerous substances and articles.

· Label

· Packing group

· ADR, IMDG, IATA Ш

· Environmental hazards:

· Marine pollutant: Symbol (fish and tree) Special marking (ADR): Symbol (fish and tree) Special marking (IATA): Symbol (fish and tree)

Warning: Miscellaneous dangerous substances and · Special precautions for user

articles.

· Hazard identification number (Kemler code): 90 · EMS Number: F-A,S-F

Maritime transport in bulk according to IMO

instruments Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ) 5 kg · Transport category 3 · Tunnel restriction code

· Limited quantities (LQ) 5 kg

· UN "Model Regulation": UN 3077 ENVIRONMENTALLY HAZARDOUS

SUBSTANCE, SOLID, N.O.S. (ZINC SULFATE

HEPTAHYDRATE), 9, III

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV) Not listed
- · REGULATION (EC) No 1907/2006 ANNEX XVII Not listed
- · DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex II

Substance is not listed.

- National regulations:
- Storage of hazardous substances in in nonstationary vessels (TRGS 510) (Germany) TRHS 510: 13 non-combustible solids
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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16 Other information

The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.

- · Reasons for alterations This version replaces all old versions.
- · Version number of previous version: 1.00
- Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity - Category 4

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1