



Safety Data Sheet

based on Regulation (EC) No 1907/2006

Revision date: 06.01.2022
Date of entry into force: 06.01.2022

Version: 9
Replaces version: 8

Clorina

This is the English translation of the German SDS (for Germany).

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

1.1 Product identifier

Trade name: Chlorina

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

Use of the mixture:

For wipe disinfection of surfaces, inventory and medical devices
For professional use

1.3 Details of the supplier of the safety data sheet

Department providing information: Department of Science and Technology Berlin

E-mail: kontakt@lysoform.de
Telephone: +49 30 77992-226

Supplier (distributor):
Germany

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CH-5210 Windisch
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1.4 Emergency telephone number

Germany

Munich toxicological department
Klinikum rechts der Isar
Ismaninger Str. 22, 81675 Muenchen
Tel.: +49 89 19240
Fax: +49 89 4140-2467

Switzerland

Schweizer Toxikologisches Informationszentrum
Freiestrasse 16
8032 Zürich
Telefon: 145 / only for calls in Switzerland
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Section 2: Hazards identification

2.1 Classification of the substance or mixture

CLP classification (EG) Nr. 1272/2008:

Acute oral toxicity: Cat.4 H302
Respiratory sensitization: Cat.1 H334
Skin corrosion: Cat.1B H314



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2.2 Label elements

Symbol und signal word:



Danger

Hazard statements:

H302 Harmful if swallowed.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H314 Causes severe skin burns and eye damage.

EUH 031 Contact with acids liberates toxic gas.

Precautionary statements:

P260 Do not breathe dust.

P280 Wear protective gloves, protective clothing and eye protection / face protection.

P233 Keep container tightly closed.

P305 + P351 + P338. IF IN EYES: Rinse cautiously with water for a few minutes. Remove contact lenses if possible. Rinse further.

P342 + P311 If experiencing respiratory symptoms: Call a doctor.

Hazardous ingredients for labelling: Tosylchloramide sodium · 3 H₂O

2.3 Other hazards

The ingredients (from 0.1%) do not meet the criteria for classification as PBT or vPvB and no endocrine disrupting properties are known.

Section 3: Composition/information on ingredients

3.1 Substances

Tosylchloramide sodium · 3 H₂O

EG-No: 204-854-7 CAS-No: 7080-50-4

Quantity : 100 %

Acute oral toxicity: Cat.4 H302 - Harmful if swallowed.

Respiratory sensitization: Cat.1 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin corrosion: Cat.1B H314 - Causes severe skin burns and eye damage.

EUH 031 Contact with acids liberates toxic gas.

Section 4: First aid measures

4.1 Description of first aid measures

Always consult a doctor. Show the Safety Data Sheet, container or label.

Inhalation: Fresh air, rest, loosen clothes. Respiratory aid for breathing difficulties. If heavily inhaled, medical treatment is required.

Skin contact: Remove contaminated clothing immediately. Wash affected areas with plenty of soap and water. Wash clothing before further use.

Eye contact: Immediately with eyes wide open, rinse with plenty of water for at least 15 minutes. To ensure successful rinsing, the eyelids must be spread away from the eyeball.

Ingestion: Only when conscious: rinse mouth. Give plenty of water to drink. DO NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Acute: mucosal irritation and corrosion



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- 4.3 Indication of any immediate medical attention and special treatment needed**
No information

Section 5: Firefighting measures

- 5.1 Extinguishing media**
Powder, water spray or foam.
- 5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gas may develop:
For example: Hydrochloric acid (HCl), nitrous gases (NO_x) and sulfur dioxide (SO₂)
- 5.3 Advice for firefighters**
Wear self-contained breathing apparatus. Wear fully protective suit.

Section 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
Do not inhale dust. Avoid contact with eyes and skin. For personal protection information, see section 8.
- 6.2 Environmental precautions**
Do not allow to reach sewage system / surface or ground water.
- 6.3 Methods and material for containment and cleaning up**
Collect as much as possible in a container for disposal. Rinse off the rest with water.
- 6.4 Reference to other sections**
Safe handling (section 7), personal protective equipment (section 8) and disposal considerations (section 13)

Section 7: Handling and storage

- 7.1 Precautions for safe handling**
Ensure good ventilation / exhaustion at the workplace.
Notes on general hygiene measures at the workplace:
Keep away from food. Take off all contaminated clothing immediately. Avoid contact with eyes.
- 7.2 Conditions for safe storage, including any incompatibilities**
Store cool but frost-free, well ventilated, dry and out of reach of children.
Keep container tightly closed.
Further information about storage conditions
Keep separate from food.
Storage class: 8B (TRGS 510) for Germany
- 7.3 Specific end use(s)**
No specific end use known.

Section 8: Exposure controls/personal protection

- 8.1 Control parameters**
No



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8.2 Exposure controls

Keep away from foodstuff, beverages and feed. Take off all contaminated clothing immediately. Wash hands before breaks and at end of work. Avoid contact with skin and eyes.

Respiratory protection

Respiratory protection is recommended for handling the Clorina powder and, depending on the ventilation situation, for a certain time afterwards. You can use respiratory protection with a particle filter "P2". The respirator should have an exhalation valve or similar. You should make sure that the respiratory protection fits snugly on the face. This is the only way that all of the inhaled air really passes through the filter.

Hand protection

Impermeable gloves

The wearing of liquid-tight gloves, without changing over four hours daily, is to be regarded as stressful and may not be a permanent measure.

Penetration time of glove material

The resistance of gloves is dependent on many features (material, layer thickness, manufacturer, temperature, stress and duration of contact) and not predictable in advance. Each user has to test the resistance of the gloves for his personal use. Penetration times according to EN 374 are specified by manufacturers and provide guidance for the comparison of gloves.

Material recommendations

Nitrile rubber or Butyle rubber

Skin protection

Protective clothing

In order to prevent skin irritations in the professional field, the following is - regardless of the actual contact with disinfectants - recommended:

- Fast skin penetrating care cream in between if needed.
- A greasy cream after washing at the end of work or before work breaks.

Eye / face protection

When handling the concentrated product, use tight-fitting eye protection. If there is no risk of splashing, no eye protection is required when using the diluted product.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state:	Hard, fine powder
- Colour:	White
Odour:	Characteristic, weak after chlorine
Auto-ignition temperature:	176 °C
pH (50 g/l H ₂ O) at 20 ° C:	ca. 8
Density at 20 ° C:	1430 kg/m ³
Bulk density:	0.7 g/ml ± 0.1
Solubility in water:	150 g/l (25 °C)
Oxidising properties:	Not determined, has an oxidizing effect

Section 10: Stability and reactivity

10.1 Reactivity

Has an oxidizing effect.

10.2 Chemical stability

No decomposition if stored and used as described. In contact with water vapor unstable. In contact with acid, develops toxic gases.

10.3 Possibility of hazardous reactions

No hazardous reactions if used as described.



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10.4 Conditions to avoid

See section 7

10.5 Incompatible materials

Water vapour, acids

10.6 Hazardous decomposition products

No decomposition if used as described. If decompose: Chlorine, carbon dioxide, carbon monoxide, hydrogen chloride, nitrogen oxides, sulfur oxides, sodium oxide

Section 11: Toxicological information

Acute toxicity:

Oral LD50: rat, mouse: approx. 1000 mg / kg

Inhalation LC50: Rat: > 0.275 mg / l (4 hours) (maximum achievable concentration)

Irritation:

Skin: Moisturizing powder: Corrosive / 8% Solution: Non-irritating

Eyes: Moisturizing powder: Very irritating / 8% Solution: Moderately irritating /

0.5% Solution: Non-irritating / 0.2% solution absolutely non-irritating

Sensitization:

May cause sensitization by inhalation and skin contact

Genotoxicity: Ames test: Not mutagenic

Micronucleus Test: Not mutagenic

Other toxicological information

Subchronic oral toxicity (90 days), rat: concentration at which no effect was observed (NOEL) 15 mg / kg / day

Section 12: Ecological information

Fish: 96h-LC50 (Poecilia reticulata): 31 mg / l

Daphnia: 48h-EC50: 4.5 mg / l

Degradation biotic

Easily biodegradable (at low concentrations).

p-Toluenesulfonamide (hydrolysis product): Easily biodegradable

Other Information

Reproduction test with Daphnia magna: Lower threshold (NOEL) > 1 mg / l

The substance is classified in the water hazard class 2 (according to AwSV).

Endocrine disrupting properties for the environment are not known.

Section 13: Disposal considerations

13.1 Waste treatment methods

Treatment of the mixture

Disposal in compliance with local regulations. Waste should not be disposed of via wastewater.

Treatment of contaminated packaging

Completely emptied containers can be recycled.

Waste code according to AVV

07 05 13 solid waste containing hazardous substances

15 01 02 for the primary packaging

Relevant EU or other regulations

German law: KrW-/AbfG (Kreislaufwirtschafts- und Abfallgesetz)



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Section 14: Transport information

14.1 UN-number: 3263

14.2 Proper shipping name

All modes of transport:
CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (tosylchloramide sodium)

14.3 Transport hazard class(es)

Land: ADR/RID and GGVS/GGVE class: 8 Corrosive substances
Tunnel restriction code: E
Sea: IMDG/GGV Sea-class: 8
EMS-number: F-A, S-B
Air: ICAO-TI / IATA-DGR-class: 8

14.4 Packing group

III

14.5 Environmental hazards

Labelling environmentally hazardous substances

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: No
IMDG-Code: Marine Pollutant: No

14.6 Special precautions for user (transport company)

No

14.7 Maritime transport in bulk according to IMO instruments

No transport in bulk

Section 15: Regulatory information

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

German regulations:

TRGS und Bekanntmachungen / Betriebssicherheitsverordnung BetrSichV /
Jugendarbeitsschutzgesetz / Mutterschutzgesetz / Vorgaben Berufsgenossenschaften

Other information:

Medical device class IIa CE 0482 according to the German Medical Devices Act
Biozide: Baua Reg.-No N-12730, N-12731, N-12732, N-12733

Section 16: Other information

Changes since the last version

Version 8: First English version / Version number of the SDS is similar to the German SDS
Version 9: New company logo

Literature and data sources TRGS / Gestis / professional associations / MSDS of ingredients

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product with regard to the safety requirements. The information should not be regarded in any way as a description of the nature of the goods (product specification). Any agreed property or the suitability of the product for a specific purpose can not be derived from our information in the Safety Data Sheet. We will advise you whether and under what circumstances, the preparation is suitable for a defined purpose. Any proprietary rights and existing laws and regulations must be observed by the recipient of our product (responsibility of the recipient).