



## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 05.12.2023

Version number 5.0 (replaces version 4.9)

Revision: 05.12.2023

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

- Trade name: **Loetwasser Nr.1**
- UFI: 4D41-Q04M-400S-CMY4

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

- Technical function soldering
- Application of the substance / the mixture Soldering flux

#### 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:  
Stannol GmbH & Co. KG  
Haberstrasse 24  
D-42551 Velbert

+49 (0) 2051 3120 332  
sdb@stannol.de

- Further information obtainable from: Product Safety Department

- 1.4 Emergency telephone number: 8:00 am - 5:00 pm (CET) +49 (0) 2051 3120 332

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H302 Harmful if swallowed.  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.  
STOT SE 3 H335 May cause respiratory irritation.  
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

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

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

- Hazard pictograms



GHS05

GHS07

GHS09

- Signal word Danger

- Hazard-determining components of labelling:

zinc chloride  
ammonium chloride

- Hazard statements

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

- Precautionary statements

P260 Do not breathe mist/vapours/spray.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves / eye protection / face protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



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P310	Immediately call a doctor.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards**

Flux / flux gels:

Inhalation of vapors released during the soldering process should be avoided. Flux vapors irritate the nose, throat, and respiratory tract, and can lead to allergic reactions (asthma) after prolonged or repeated contact. Therefore, an active suction is recommended.

After working with the product and before eating, drinking or smoking, wash your hands with soap and water.

Keep out of the reach of children.

**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 7646-85-7	zinc chloride	10 - 35%
EINECS: 231-592-0	Skin Corr. 1B, H314; Eye Dam. 1, H318	
Index number: 030-003-00-2	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
	Acute Tox. 4, H302; STOT SE 3, H335	
	Specific concentration limit: STOT SE 3; H335: C ≥ 5 %	
CAS: 12125-02-9	ammonium chloride	2 - 9%
EINECS: 235-186-4	Acute Tox. 4, H302; Eye Irrit. 2, H319	
Index number: 017-014-00-8		

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

**5.3 Advice for firefighters**

- **Protective equipment:** Mouth respiratory protective device.

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- **Additional information** ERI-Card 8-06

### SECTION 6: Accidental release measures

#### · 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation  
Wear protective clothing.

#### · 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

#### · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralising agent.  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.

#### · 6.4 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.

### SECTION 7: Handling and storage

#### · 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

- **Information about fire - and explosion protection:** Keep respiratory protective device available.

#### · 7.2 Conditions for safe storage, including any incompatibilities

##### · Storage:

- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 8 B
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

#### · **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists valid during the making were used as basis.

#### · 8.2 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.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.

##### · **Respiratory protection:**

Not necessary if room is well-ventilated.  
Use suitable respiratory protective device in case of insufficient ventilation.  
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### · Hand protection



Protective gloves

Rubber gloves

Synthetic rubber gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### · Material of 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### · Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

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 Safety glasses

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

· Physical state	Fluid
· Colour:	Clear
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	100 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20 °C:	1.23 g/cm <sup>3</sup>
· Relative density	Not determined.
· Vapour density	Not determined.

### · 9.2 Other information

· Appearance:	
· Form:	Fluid

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

- Ignition temperature: Product is not selfigniting.
- Explosive properties: Product does not present an explosion hazard.
- Solvent content:
- Water: 73.6 %
- VOC (EC) 0.00 %
- Change in condition
- Evaporation rate Not determined.

### · Information with regard to physical hazard classes

- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidising gases Void
- Gases under pressure Void
- Flammable liquids Void
- Flammable solids Void
- Self-reactive substances and mixtures Void
- Pyrophoric liquids Void
- Pyrophoric solids Void
- Self-heating substances and mixtures Void
- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidising liquids Void
- Oxidising solids Void
- Organic peroxides Void
- Corrosive to metals Void
- Desensitised explosives Void

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.
- **LD/LC50 values relevant for classification:**  
**CAS: 7646-85-7 zinc chloride**  
Oral LD50 350 mg/kg (rat)
- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **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** May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**  
None of the ingredients is listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** 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.  
Toxic for aquatic organisms

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**  
HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity  
HP6 Acute Toxicity  
HP8 Corrosive  
HP14 Ecotoxic
- **Uncleaned packaging:**
- **Recommendation:** Packagings that may not be cleansed are to be disposed of in the same manner as the product.

### SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN1840
- **14.2 UN proper shipping name**
- **ADR** 1840 ZINC CHLORIDE SOLUTION, ENVIRONMENTALLY HAZARDOUS  
ZINC CHLORIDE SOLUTION, MARINE POLLUTANT
- **IMDG** ZINC CHLORIDE SOLUTION
- **IATA** ZINC CHLORIDE SOLUTION

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**· 14.3 Transport hazard class(es)****· ADR, IMDG**

**· Class** 8 Corrosive substances.  
**· Label** 8

**· IATA**

**· Class** 8 Corrosive substances.  
**· Label** 8

**· 14.4 Packing group**

**· ADR, IMDG, IATA** III

**· 14.5 Environmental hazards:**

**· Marine pollutant:** Product contains environmentally hazardous substances: zinc chloride  
**· Special marking (ADR):** Symbol (fish and tree)

**· 14.6 Special precautions for user** Warning: Corrosive substances.

**· Hazard identification number (Kemler code):** 80

**· EMS Number:** F-A,S-B

**· Segregation groups** (SGG1) Acids, (SGG7) heavy metals and their salts (including their organometallic compounds)

**· Stowage Category** A

**· 14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

**· Transport/Additional information:****· ADR**

**· Limited quantities (LQ)** 5L  
**· Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

**· Transport category** 3

**· Tunnel restriction code** E

**· IMDG**

**· Limited quantities (LQ)** 5L  
**· Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

**· UN "Model Regulation":** UN 1840 ZINC CHLORIDE SOLUTION, 8, III, ENVIRONMENTALLY HAZARDOUS

### SECTION 15: Regulatory information

**· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****· Labelling according to Regulation (EC) No 1272/2008**

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

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### · Hazard pictograms



GHS05 GHS07 GHS09

### · Signal word Danger

### · Hazard-determining components of labelling:

zinc chloride  
ammonium chloride

### · Hazard statements

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

### · Precautionary statements

P260 Do not breathe mist/vapours/spray.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves / eye protection / face protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
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 doctor.  
P391 Collect spillage.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### · Directive 2012/18/EU

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.· **Seveso category E2** Hazardous to the Aquatic Environment· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 65· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.





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### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### · **Relevant phrases**

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

#### · **Department issuing SDS:** Product Safety Department

#### · **Contact:** Hr. Dörr

#### · **Date of previous version:** 05.12.2023

#### · **Version number of previous version:** 4.9

#### · **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
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- 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
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- 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
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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