



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

Printing date 09.04.2019

Version number 7

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

- **1.1 Product identifier**
- **Trade name:** Lötlwasser Nr.1/V
- **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**  
Skin Corr. 1B H314 Causes severe skin burns and 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
- **Hazard statements**  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
P102 Keep out of reach of children.  
P260 Do not breathe mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/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/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.  
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.



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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	2.5-15%
EINECS: 231-592-0	Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; STOT SE 3, H335	

- **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.
- **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:** 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.

**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 item 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.

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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.

· **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

#### · 8.1 Control parameters

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

##### **CAS: 7646-85-7 zinc chloride**

WEL (Great Britain) Short-term value: 2 mg/m<sup>3</sup>

Long-term value: 1 mg/m<sup>3</sup>

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

#### · 8.2 Exposure controls

##### · **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 and skin.

##### · **Respiratory protection:**

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

##### · **Protection of hands:**



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

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- **Eye protection:** Safety glasses

### SECTION 9: Physical and chemical properties

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

##### · General Information

##### · Appearance:

Form:	Fluid
Colour:	Clear
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.

##### · Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	100 °C

- Flash point: Not applicable.
- Flammability (solid, gas): Not applicable.
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product does not present an explosion hazard.
- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
- Vapour pressure: Not determined.
- Density at 20 °C: 1.09 g/cm<sup>3</sup>
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with water: Not miscible or difficult to mix.
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Solvent content:
  - Water: 89.5 %
- 9.2 Other information: No further relevant information available.

### 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.



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### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**  
**CAS: 7646-85-7 zinc chloride**  
Oral LD50 350 mg/kg (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes severe skin burns and eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### 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.
- **Ecotoxicological 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
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### 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**  
11 05 04\* spent flux  
15 01 10\* packaging containing residues of or contaminated by hazardous substances

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN-Number**  
· **ADR, IMDG, IATA** UN1840
- **14.2 UN proper shipping name**  
· **ADR** 1840 ZINC CHLORIDE SOLUTION mixture,  
ENVIRONMENTALLY HAZARDOUS  
· **IMDG** ZINC CHLORIDE SOLUTION mixture, MARINE  
POLLUTANT  
· **IATA** ZINC CHLORIDE SOLUTION mixture
- **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  
Symbol (fish and tree)  
· **Special marking (ADR):** Symbol (fish and tree)
- **14.6 Special precautions for user** Warning: Corrosive substances.  
· **Danger code (Kemler):** 80  
· **EMS Number:** F-A,S-B  
· **Segregation groups** Acids, heavy metals and their salts (including their organometallic compounds)
- **Stowage Category** A
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** 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

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· 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 MIXTURE, 8, III, ENVIRONMENTALLY HAZARDOUS

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- 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
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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.  
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
- **Abbreviations and acronyms:**  
ADR: Accord européen sur le transport 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)  
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  
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