



Safety Data Sheet acc. to OSHA HCS

Printing date 03/04/2024

Reviewed on 03/04/2024

1 Identification

- **Product identifier**
- **Trade name:** Loetfett HA
- **Application of the substance / the mixture** Soldering flux
- **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
- **Information department:** Product Safety Department
- **Emergency telephone number:**
8:00 am - 5:00 pm (CET) +49 (0) 2051 3120 332
- +1 (307) 899 3845

2 Hazard(s) identification

- **Classification of the substance or mixture**
Skin Corrosion 1B H314 Causes severe skin burns and eye damage.
Eye Damage 1 H318 Causes serious eye damage.
Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
zinc chloride
- **Hazard statements**
Causes severe skin burns and eye damage.
May cause respiratory irritation.
- **Precautionary statements**
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves / eye protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a doctor.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:**
 - CAS: 7646-85-7 zinc chloride
 - EINECS: 231-592-0
 - CAS: 12125-02-9 ammonium chloride
 - EINECS: 235-186-4

4 First-aid measures

- **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 copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective clothing.
- **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 and ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.

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Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

· 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.

· Protective Action Criteria for Chemicals**· PAC-1:**

CAS: 7646-85-7	zinc chloride	2 mg/m ³
CAS: 12125-02-9	ammonium chloride	20 mg/m ³

· PAC-2:

CAS: 7646-85-7	zinc chloride	800 mg/m ³
CAS: 12125-02-9	ammonium chloride	54 mg/m ³

· PAC-3:

CAS: 7646-85-7	zinc chloride	4,800 mg/m ³
CAS: 12125-02-9	ammonium chloride	330 mg/m ³

7 Handling and storage

· Handling:**· Precautions for safe handling**

Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.

· Information about protection against explosions and fires: Keep respiratory protective device available.

· 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 receptacle tightly sealed.
- Storage class:** 8 A
- Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see section 7.

· Control parameters**· Components with limit values that require monitoring at the workplace:****CAS: 7646-85-7 zinc chloride**

PEL (USA) Long-term value: 1 mg/m³
Fume

REL (USA) Short-term value: 2 mg/m³
Long-term value: 1 mg/m³

TLV (USA) Short-term value: 2 mg/m³
Long-term value: 1 mg/m³
fume

CAS: 12125-02-9 ammonium chloride

REL (USA) Short-term value: 20 mg/m³
Long-term value: 10 mg/m³

TLV (USA) Short-term value: 20 mg/m³
Long-term value: 10 mg/m³

· Additional information: The lists that were valid during the creation were used as basis.

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- **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.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter B
- **Protection of hands:**



Protective gloves

Rubber gloves
Synthetic 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 protection:** Safety glasses

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - **Form:** Solid
 - **Color:** According to product specification
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
 - **Melting point/Melting range:** Undetermined.
 - **Boiling point/Boiling range:** 721 °C (1,329.8 °F)
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Decomposition temperature:** Not determined.
- **Ignition temperature:** Product is not selfigniting.

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- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - **Lower:** Not determined.
 - **Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density:** Not applicable.
- **Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with Water:** Soluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - **Dynamic:** Not applicable.
 - **Kinematic:** Not applicable.
- **Solvent content:**
 - **Water:** 4.0 %
 - **VOC content:** 0.00 %
 - **Solids content:** 96.0 %
- **Other information:** No further relevant information available.

10 Stability and reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **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:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
 - **CAS: 7646-85-7 zinc chloride**
 - Oral LD50 350 mg/kg (rat)
- **Primary irritant effect:**
 - **on the skin:** Caustic effect on skin and mucous membranes.
 - **on the eye:**
 - Strong caustic effect.
 - Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Corrosive
 - Irritant
 - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.
- **NTP (National Toxicology Program)**
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (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 bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
 - **DOT**
 - **IMDG, IATA**
 - **UN proper shipping name**
 - **DOT**
 - **IMDG**
 - **IATA**
- not regulated
UN3077
- not regulated
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(ZINC CHLORIDE), MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(ZINC CHLORIDE)

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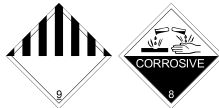
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· **Transport hazard class(es)**

· **DOT**



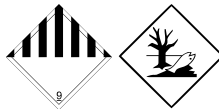
· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9, 8

· **IMDG, IATA**



· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**

· **DOT**

not regulated

· **IMDG, IATA**

III

· **Environmental hazards:**

Product contains environmentally hazardous substances: zinc chloride

· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

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

90

· **EMS Number:**

F-A,S-F

· **Segregation groups**

(SGG1) Acids

· **Stowage Category**

A

· **Stowage Code**

SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **IMDG**

· **Limited quantities (LQ)**

5 kg

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC CHLORIDE), 9, III

15 Regulatory information

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

No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

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· TSCA (Toxic Substances Control Act):

CAS: 7646-85-7 zinc chloride

ACTIVE

CAS: 7732-18-5 water, distilled, conductivity or of similar purity

ACTIVE

CAS: 12125-02-9 ammonium chloride

ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65**· Chemicals known to cause cancer:**

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories**· EPA (Environmental Protection Agency)**

CAS: 7646-85-7 zinc chloride

D, I, II

· TLV (Threshold Limit Value)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).**· Hazard pictograms**

GHS05

GHS07

· Signal word Danger**· Hazard-determining components of labeling:**

zinc chloride

· Hazard statements

Causes severe skin burns and eye damage.

May cause respiratory irritation.

· Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Wear protective gloves / eye protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a doctor.

Collect spillage.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

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

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

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.

- **Department issuing SDS:** Product Safety Department
- **Contact:** Hr. Dörr
- **Date of preparation / last revision** 03/04/2024 / 6.3

- **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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)
NFPA: National Fire Protection Association (USA)
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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

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