Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 12.03.2014 Revision: 12.03.2014

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

· **1.1 Product identifier**

· **Trade name: SOLDERLENE**

· **Article number:** 30004, 30016

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Soldering flux

· **1.3 Details of the supplier of the Safety Data Sheet**

· **Manufacturer/Supplier:**
Highside Chemicals, Inc.
11114 Reichold Road
Gulfport, MS 39503 USA
Phone: (228) 896-9220

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.


health hazard

Carc. 1B H350 May cause cancer.


corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.


environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**


C; Corrosive

R34: Causes burns.


Xi; Irritant

R37: Irritating to respiratory system.


N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **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**


This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).


GHS05 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Petrolatum
zinc chloride
· **Hazard statements**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.
H314 Causes severe skin burns and eye damage.
H350 May cause cancer.
H411 Toxic to aquatic life with long lasting effects.
· **Precautionary statements**

P281	Use personal protective equipment as required.
P273	Avoid release to the environment.
P264	Wash thoroughly after handling.
P202	Do not handle until all safety precautions have been read and understood.
P303+P361+P353	IF ON SKIN (or hair): Remove/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.

· **Additional information:**
Restricted to professional users.
· **Hazard description:**
· **WHMIS-symbols:**
D2B - Toxic material causing other toxic effects

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E - Corrosive material



· **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *3
Fire = 1
Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**
None of the ingredients is listed.

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

3 Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 7646-85-7 EINECS: 231-592-0 Index number: 030-003-00-2	zinc chloride C R34; Xn R22; N R50/53 Skin Corr. 1B, H314 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302	10-25%
CAS: 12125-02-9 EINECS: 235-186-4 Index number: 017-014-00-8	ammonium chloride Xn R22; Xi R36 Acute Tox. 4, H302; Eye Irrit. 2, H319	< 5,0%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.

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· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
Seek immediate medical help for blistering or open wounds.
· **After eye contact:**
Remove contact lenses if worn, if possible.
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Strong caustic effect on skin and mucous membranes.
Breathing difficulty
Coughing
Nausea
Cramp
Gastric or intestinal disorders.
· **Hazards**
Danger of gastric perforation.
Danger of severe eye injury.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:** Water
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** No further relevant information available.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Particular danger of slipping on leaked/spilled product.
· **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.

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Inform respective authorities in case of seepage into water course or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
· **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.

7 Handling and storage

· **7.1 Precautions for safe handling**
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Unsuitable material for receptacle: aluminium.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
· **7.3 Specific end use(s)** No further relevant information available.

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:**	
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

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EL (Canada)	Short-term value: 2 mg/m³ Long-term value: 1 mg/m³
EV (Canada)	Short-term value: 2 mg/m³ Long-term value: 1 mg/m³ fume
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
EL (Canada)	Short-term value: 20 mg/m³ Long-term value: 10 mg/m³ fume
EV (Canada)	Short-term value: 20 mg/m³ Long-term value: 10 mg/m³ fume

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
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 required under normal conditions of use.
Use suitable respiratory protective device when aerosol or mist is formed.
Use suitable respiratory protective device when high concentrations are present.
For spills, respiratory protection may be advisable.
· **Protection of hands:**


Protective gloves

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

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· **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.
· **For the permanent contact gloves made of the following materials are suitable:**
Butyl rubber, BR
Neoprene gloves
· **Eye protection:**
Contact lenses should not be worn.


Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No further relevant information available.
· **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Liquid
Colour:	Yellowish
· **Odour:**	Petroleum-like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	1330 ° F / 721 °C
· **Flash point:**	390 ° F / 199 °C
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure at 20 °C:**	1 hPa

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· **Density at 20 °C:** 0,815 - 0,880 g/cm³
· **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.
· **9.2 Other information** No further relevant information available.

10 Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong oxidizing agents.
Reacts with strong alkali.
· **10.4 Conditions to avoid** Store away from oxidizing agents.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Chlorine compounds
Toxic metal oxide smoke

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**		
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.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

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Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
· **Repeated dose toxicity:** May cause damage to organs through prolonged or repeated exposure.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Carc. 1B

12 Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** Toxic for aquatic organisms
· **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.
· **Ecotoxical effects:**
· **Remark:**
Toxic for fish
The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.
Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
· **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 unneutralized.
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
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

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.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

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

14 Transport information

· **14.1 UN-Number**
· **DOT** Not Regulated
· **ADR, IMDG, IATA** UN3082
· **14.2 UN proper shipping name**
· **DOT** Not Regulated
· **ADR** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC CHLORIDE)
· **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC CHLORIDE), MARINE POLLUTANT
· **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC CHLORIDE)
· **14.3 Transport hazard class(es)**

· **DOT**
· **Class** Not Regulated

· **ADR**



· **Class** 9 (M6) Miscellaneous dangerous substances and articles.
· **Label** 9

· **IMDG**
· **Class** 9 Miscellaneous dangerous substances and articles.
· **Label** 9

· **IATA**



· **Class** 9 Miscellaneous dangerous substances and articles.
· **Label** 9
· **14.4 Packing group**
· **DOT** Not Regulated
· **ADR, IMDG, IATA** III
· **14.5 Environmental hazards:**
· **Marine pollutant:** Yes
· **Special marking (ADR):** Symbol (fish and tree)

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· **Special marking (IATA):** Symbol (fish and tree)
· **14.6 Special precautions for user** Warning: Miscellaneous dangerous substances and articles.
· **Danger code (Kemler):** 90
· **EMS Number:** F-A,S-F
· **Segregation groups** Acids
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 5L
· **Transport category** 3
· **Tunnel restriction code** E
· **UN "Model Regulation":** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC CHLORIDE), 9, III

15 Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
Substance / component not listed individually, but listed under family group as Zinc salts.

7646-85-7	zinc chloride

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California):**

· **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)**

7646-85-7	zinc chloride	D, I, II

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· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

7646-85-7	zinc chloride
12125-02-9	ammonium chloride

· **Other regulations, limitations and prohibitive regulations**
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
· **15.2 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.

· **Relevant phrases**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

R22 Harmful if swallowed.
R34 Causes burns.
R36 Irritating to eyes.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **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
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists

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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)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· **Sources**

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