



**SAFETY DATA SHEET**

SDS Name: **Al-Cop Braze, Flux Cored, Aluminum to Copper**  
SolderWeld, Inc.

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**SECTION I: Identification of the substance/mixture and the company**

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**1.1 Product Identifier**

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Product name: **Al-Cop Braze, Flux Cored, Aluminum to Copper**

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**1.2 Relevant Identified uses of the substance and uses advised against**

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**1.2.1 Relevant identified uses**

Main use category : Professional Use  
Industrial/Professional use spec : For Professional use only  
Use of substance : Brazing, soldering, and welding products, flux products

**1.2.2 Uses advised against**

No additional information available

**1.3 Details of Supplier of the Safety Data Sheet**

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SolderWeld, Inc.  
2050 N 300 W #72  
Spanish Fork, UT 84660  
USA  
800-356-8449  
info@solderweld.com

**1.4 Emergency Telephone Number**

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Emergency Number : 001-800-424-9300 (Chemtrec)

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**SECTION 2: Hazards Identification**

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**2.1 Classification of the substance**

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Classified according to the criteria of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Controlled Products Regulations.

**2.2 Label elements**

- **Label elements**
  - **GHS label elements**  
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
  - **Hazard pictograms** Not Regulated
  - **Signal word** Not Regulated
  - **Hazard-determining components of labeling:** None.
  - **Hazard statements** Not Regulated
  - **Precautionary statements** Not Regulated
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**2.3 Other Hazards****· Other hazards which do not result in GHS classification:**

Heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to brazing fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product.

**SECTION 3: Hazards Identification****3.1 Mixture****· Dangerous components:**

7440-66-6	zinc metal	70-98%
7429-90-5	aluminum	2-30%
138577-01-2	cesium fluoroaluminate	10-25%

**· Composition comments:**

The term "Hazardous Ingredients" should be interpreted as a term defined in Hazard Communication standards and does not necessarily imply the existence of a hazard. The product may contain additional nonhazardous ingredients or may form additional compounds under the condition of use. Refer to Sections 2 and 8 for more information.

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

· **General information:** No special measures required.

**· After inhalation:**

Move to fresh air if breathing is difficult. If breathing has stopped, perform artificial respiration and obtain medical assistance at once.

**· After skin contact:**

Remove contaminated clothing and wash the skin thoroughly with soap and water. For reddened or blistered skin, or thermal burns, obtain medical assistance at once.

**· After eye contact:**

Dust or fume from this product should be flushed from the eyes with copious amounts of clean, tepid water until transported to an emergency medical facility. Do not allow victim to rub or keep eyes tightly closed. Obtain medical assistance at once.

**· After swallowing:**

Unlikely due to form of product, except for granular materials. Avoid hand, clothing, food, and drink contact with metal fume or powder which can cause ingestion of particulate during hand to mouth activities such as drinking, eating, smoking, etc. If ingested, do not induce vomiting. Contact a poison control center.

Unless the poison control center advises otherwise, wash out mouth thoroughly with water. If symptoms develop, seek medical attention at once.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

## SECTION 5: Firefighting measures

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### 5.1 Extinguishing media

Suitable extinguishing media: As shipped, the product will not burn. In case of fire in the surroundings: use appropriate extinguishing agent. For metal fires: Use specific agents only.

### 5.2 Special hazards arising from the mixture

Fire hazard:	No Information Provided
Explosion hazard:	No Information Provided
Reactivity in case of fire:	No Information Provided
Hazardous decomposition products in case of fire:	No Information Provided

### 5.3 Advice for firefighters

**·Special fire fighting procedures:**

Use standard firefighting procedures and consider the hazards of other involved materials.

**·Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

**·Additional information**

Read and understand American National Standard Z49.1, "Safety In Welding, Cutting and Allied Processes" and National Fire Protection Association NFPA 51B, "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" before using this product.

## SECTION 6: Accidental release measures

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

General measures: Refer to recommendations in Section 8.

#### 6.1.1 For non-emergency personnel

Protective equipment:	Wear suitable protective clothing, gloves and eye or face protection.
Emergency procedures:	Ventilate area. Avoid contact with skin and eyes. Avoid breathing dust/fume.
Measures in case of dust release:	Where excessive dust may result, use approved respiratory protection equip.

#### 6.1.2 For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection". Avoid contact with skin and eyes. Avoid breathing dust/fume.

Emergency procedures: Evacuate unnecessary personnel. Ventilate area.

### 6.2 Environmental precautions

Avoid release to the environment.

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

For containment:	No special measures required.
Methods for cleaning up:	Recover mechanically the product. This material and its container must be disposed of in a safe way and as per local legislation.
Other information:	Dispose of in accordance with relevant local regulations. This material and its container must be disposed of as hazardous waste.

### 6.4 Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer section 13: "Disposal considerations".

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

Precautions for safe handling:	Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume.
Hygiene measures:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

**7.2 Conditions for safe storage, including any incompatibilities**

Technical measures:	No special requirements.
Storage conditions:	No special requirements.
Incompatible products:	Acetylene, ammonia, ammonium nitrate, aqua regia, dioxane, ethylene oxide, chlorine trifluoride, halogens, hydrogen peroxide, hydrazine, mononitrate, hydrazoic acid, hydroxylamine, hydrogen sulfide, performic acid, phosphorus, selenium, sulfur, titanium plus potassium chlorate, bromates chlorates and iodate of alkali and alkali earth metals.
Storage area:	No special requirements.
Packaging materials:	No special requirements.

**7.3 Specific end use**

No further relevant information available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) are values published by the American Conference of Government Industrial Hygienists (ACGIH). ACGIH Statement of Positions Regarding the TLVs® and BEIs® states that the TLV-TW A should be used as a guide in the control of health hazards and should not be used to indicate a fine line between safe and dangerous exposures. See Sections 2, 3, 8, 10, and 11 for information on potential fume constituents of health interest. Threshold Limit Values are figures published by the American Conference of Government Industrial Hygienists.

**8.2 Exposure controls**

Appropriate engineering controls:	Provide adequate general and local exhaust ventilation
Personal protective equipment	Combined gas/dust mask with filter type P3. Gloves. Safety glasses.

Materials for protective clothing:

Hand protection:

Eye protection:

Skin and body protection:

Respiratory protection:

Wear suitable protective clothing

Protective gloves

Safety glasses.

Wear suitable protective clothing

Combined gas/dust mask with filter type P3



Environmental exposure controls:

Avoid release to the environment.

**SECTION 9: Physical and chemical properties**

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**9.1 Information on basic physical and chemical properties**

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**· Information on basic physical and chemical properties****· General Information**

Appearance:	Solid material
Color:	Silver-colored
Odor:	Odorless
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not determined.
Auto-ignition temperature:	Not determined.
Decomposition temperature:	Product is not self-igniting.
Auto igniting:	Product does not present an explosion hazard.
Danger of explosion:	Not determined.
Explosion limits:	Not determined.
Lower:	Not applicable.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density:	Not applicable.
Relative density	Not applicable.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with Water:	Insoluble.
Viscosity:	Not determined.
Dynamic:	Not applicable.
Partition coefficient (n-octanol/water):	Not applicable.
Kinematic:	Not applicable.
Other information:	No further relevant information available.

**SECTION 10: Stability and reactivity**

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- **Reactivity** The product is non-reactive under normal conditions of use, storage and transport.
- **Chemical stability** Stable under normal temperatures and pressures.

**10.1 Reactivity**

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No decomposition if used and stored according to specifications.

**10.3 Possibility of hazardous reactions**

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Reacts with strong acids and alkali. Reacts with strong oxidizing agents.

**10.4 Conditions to avoid**

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**10.5 Incompatible materials**

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No further relevant information available.

**10.6 Hazardous decomposition products**

No decomposition if used and stored according to specifications.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Acute toxicity:	LD/LC50 values that are relevant for classification:
Skin corrosion/irritation:	None.
Serious eye damage/irritation:	No irritant effect.
Respiratory or skin sensitization:	No irritating effect.
Germ cell mutagenicity:	No irritating effect.
Carcinogenicity:	Not known or expected under normal use
Reproductive toxicity:	Not known or expected under normal use
Specific target organ toxicity (single exposure):	Not known or expected under normal use
Specific target organ toxicity (repeated exposure):	Not known or expected under normal use

**SECTION 12: Ecology information****12.1 toxicity**

Ecology - general: No further relevant information available.

Ecology- Water: No further relevant information available.

**12.2 Persistence and degradability**

Inorganic product, is not eliminable from water by means of biological cleaning processes.

**12.3 Bioaccumulative potential**

Bioaccumulative potential: Not established

**12.4 Mobility in soil**

Ecology - Soil: Not established

**12.5 Results of PBT and vPvB assessment**

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

**12.6 Other adverse effects**

Other adverse effects: None known  
Additional information: No other effects known

**SECTION 13: Disposal consideration****13.1 Waste treatment methods****· Recommendation:**

The generation of waste should be avoided or minimized whenever possible. When practical, recycle in an environmentally acceptable, regulatory compliant manner. Dispose of non-recyclable products in accordance with all applicable Federal, State, Provincial, and Local requirements.

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.

**· Uncleaned packagings:**

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

**SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

**14.1 UN number**

UN-No. (ADR)	Not applicable
UN-No. (IMDG)	Not applicable
UN-No. (IATA)	Not applicable
UN-No. (ADN)	Not applicable
UN-No. (RID)	Not applicable

**14.2 UN proper shipping name**

Proper shipping name (ADR)	Not applicable
Proper shipping name (IMDG)	Not applicable
Proper shipping name. (IATA)	Not applicable
Proper shipping name (ADN)	Not applicable
Proper shipping name (RID)	Not applicable

**14.3 Transport hazard class(es)**

ADR	
Transport hazard class(es)	Not Applicable
IMDG	
Transport hazard class(es)	Not Applicable
IATA	
Transport hazard class(es)	Not Applicable
ADN	
Transport hazard class(es)	Not Applicable
RID	
Transport hazard class(es)	Not Applicable

**14.4 Packing group**

Packing group (ADR)	Not applicable
Packing group (IMDG)	Not applicable
Packing group (IATA)	Not applicable
Packing group (ADN)	Not applicable
Packing group (RID)	Not applicable

**14.5 Environmental hazards**

Dangerous for the environment	No
Marine pollutant	No
Other information	No supplementary information available

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance**

<ul style="list-style-type: none"> <li>· <b>US Federal Regulations</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b></li> </ul>
None present or none present in regulated quantities.
<ul style="list-style-type: none"> <li>· <b>Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)</b></li> </ul>
None present or none present in regulated quantities.
<ul style="list-style-type: none"> <li>· <b>Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):</b></li> </ul>
None present or none present in regulated quantities.
<ul style="list-style-type: none"> <li>· <b>Proposition 65 (California)</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause cancer:</b></li> </ul>
None of the ingredients are listed.

**SECTION 16: Other information**

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**•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

ACGIH: American Conference of Governmental Industrial Hygienists

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

\*This information must be included in all SDS that are copied and distributed for this material.

Please retain this sheet for your files. SolderWeld, Inc. maintains a file of Safety Data Sheets (SDS) for each rods and fluxes produced in compliance with Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) & various right-to-know laws.

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to SolderWeld, Inc. at the time of issue. It is our policy to include an SDS with initial orders for each product. This submission is to become a matter of record and need not accompany subsequent shipments for the same product to the same customer. The information contained on this sheet is intended solely for employee health and safety education and not for contract specification purposes. No warranty, guarantee, or representation is made by SolderWeld, Inc., nor does SolderWeld, Inc. assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances. Should you need additional information, contact us.



**SAFETY DATA SHEET**

SDS Name: Alloy Sol Aluminum Repair Rods

SolderWeld, Inc.

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**SECTION I: Identification of the substance/mixture and the company**

**1.1 Product Identifier**

Product name: Alloy Sol Aluminum Repair Rods

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**1.2 Relevant Identified uses of the substance and uses advised against**

**1.2.1 Relevant identified uses**

Main use category : Professional Use  
Industrial/Professional use spec : For Professional use only  
Use of substance : Brazing, soldering, and welding products, flux products

**1.2.2 Uses advised against**

No additional information available

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**1.3 Details of Supplier of the Safety Data Sheet**

SolderWeld, Inc.  
2050 N 300 W #72  
Spanish Fork, UT 84660  
USA  
800-356-8449  
info@solderweld.com

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**1.4 Emergency Telephone Number**

Emergency Number : 001-800-424-9300 (Chemtrec)

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**SECTION 2: Hazards Identification**

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**2.1 Classification of the substance**

**CLP/GHS Classification (1272/2008):**

Flammable Solids, Category 2

**EU Classification (67/548/EEC):**

Highly Flammable (F), R11

**Hazardous Classification per 29CFR 1910.1200 (Rev. July 1, 2012):**

Flammable Solids, Category 2

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**2.2 Label elements**

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Hazard pictograms (CLP)

Signal word (CLP) : Warning  
 Hazardous ingredients : Not applicable

Hazard statements (CLP) : H228 – Flammable Solid

Precautionary statements (CLP) : P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
 P241 – Use explosive-proof electrical/ventilating/lighting/equipment.  
 P280 – Wear protective gloves/eye protection/face protection.

## 2.3 Other Hazards

No additional information available

## SECTION 3: Hazards Identification

### 3.1 Mixture

Chemical Identity	CAS #	Range %	OSHA PEL (mg/m3)	ACGIH-TLV (mg/m3)	Carcinogenicity	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)	Hazardous Classification per 29CFR 1910.1200 (Rev. July, 2012)
#Aluminum	7429-90-5	80-95	5 (as fume)	Not Regstrd.	No	 (F) R11 – R15	(H228) Flam. Sol. 2  (H261) Water-react. 3 	(H228) Flam. Sol. 2  (H261) Water-react. 3 
Silicon	7440-21-3	5-15	4 (as SiO <sub>2</sub> )	3 (as SiO <sub>2</sub> )	No	 (F) R11		(H228) Flam. Sol. 2 

## SECTION 4: First aid measures

#### 4.1 Description of first aid measures

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First aid measures general:

First aid measures after inhalation: Remove to fresh air immediately or administer oxygen. Get medical attention immediately.

First aid measures after skin contact: Flush skin with large amounts of water. If irritation develops and persists, get medical attention.

First aid measures after eye contact: Flush eyes with water for at least 15 minutes. Get medical attention.

First aid measures after ingestion: Obtain medical attention immediately if ingested. Rinse mouth.

#### 4.2 Most important symptoms and effects, both acute and delayed

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Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : May cause moderate irritation.

Symptoms/injuries after eye contact : May cause eye irritation.

Symptoms/injuries after ingestion : Harmful if swallowed.

#### 4.3 Indication of any immediate medical attention and special treatment needed

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Treat symptomatically.

### SECTION 5: Firefighting measures

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#### 5.1 Extinguishing media

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Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning material and fire situation.

Unsuitable Extinguishing Media: Do not use water on molten metal. Large fires may be flooded with water from a distance.

#### 5.2 Special hazards arising from the mixture

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Fire hazard: No additional information provided

Explosion hazard: No additional information provided

Reactivity in case of fire: Aluminium oxides, Silicon oxides

Hazardous decomposition

products in case of fire: No additional information provided

#### 5.3 Advice for firefighters

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Precautionary measure fire: Refer to section 8.

Protection during firefighting: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

### SECTION 6: Accidental release measures

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

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General measures:

##### 6.1.1 For non-emergency personnel

Protective equipment: Wear suitable protective clothing, gloves and eye or face protection.

Emergency procedures: Ventilate area. Avoid contact with skin and eyes. Avoid breathing dust/fume.

Measures in case of dust release: Where excessive dust may result, use approved respiratory protection equip.

##### 6.1.2 For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye or face protection. For further

information refer to section 8: "Exposure controls/personal protection". Avoid contact with skin and eyes. Avoid breathing dust/fume.

Emergency procedures:

Evacuate unnecessary personnel. Ventilate area.

## 6.2 Environmental precautions

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Avoid release to the environment.

## 6.3 Methods and material for containment and cleaning up

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For containment:

No special measures required.

Methods for cleaning up:

Recover mechanically the product. This material and its container must be disposed of in a safe way and as per local legislation.

Other information:

Dispose of in accordance with relevant local regulations. This material and its container must be disposed of as hazardous waste.

## 6.4 Reference to other sections

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For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer section13: "Disposal considerations".

## SECTION 7: Handling and storage

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### 7.1 Precautions for safe handling

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Precautions for safe handling:

Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume.

Hygiene measures:

Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

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

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Technical measures:

Ensure adequate ventilation, especially in confined areas.

Storage conditions:

Store locked up. Store in well-ventilated place. Keep cool

Incompatible products:

Acetylene, ammonia, ammonium nitrate, aqua regia, dioxane, ethylene oxide, chlorine trifluoride, halogens, hydrogen peroxide, hydrazine, mononitrate, hydrazoic acid, hydroxylamine, hydrogen sulfide, performic acid, phosphorus, selenium, sulfur, titanium plus potassium chlorate, bromates chlorates and iodate of alkali and alkali earth metals.

Storage area:

Store in a well-ventilated area.

Packaging materials:

Keep only in original container.

### 7.3 Specific end use

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Other hot work operations with metals.

## SECTION 8: Exposure controls/personal protection

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### 8.1 Control parameters

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Avoid exposure to welding fumes, spatter, heated materials and dust. Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area. Keep work place and protective clothing clean and dry. Train welders to avoid contact with live electrical parts and insulate conductive parts. Check condition of protective clothing and equipment on a regular basis.

### 8.2 Exposure controls

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Appropriate engineering controls:

Provide adequate general and local exhaust ventilation

Personal protective equipment:

Combined gas/dust mask with filter type P3. Gloves. Safety glasses.

Materials for protective clothing: Protective clothing.  
 Hand protection: Wear suitable protective clothing  
 Eye protection: Protective gloves EN 12477: Protection gloves for welders  
 Skin and body protection: Safety glasses.  
 Respiratory protection: Wear suitable protective clothing  
 Combined gas/dust mask with filter type P3



Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	: Solid.
Color:	: Metallic
Odour:	: Odourless
Odour Threshold:	: Not Available
pH Value:	: Not Available
Melting Point/Melting Range:	: 1080°F, 582°C.
Freezing Point:	: Not Available
Boiling Point/Boiling Range:	: Not Available
Flash point:	: Not Available
Evaporation Rate:	: Not Available
Self-in flammability:	: Not Available
Explosion limits:	: Not Available
Vapour pressure:	: Not Available
Vapour density:	: Not Available
Density at 20°C:	: Not Available
Relative density	: 6 g/cm <sup>3</sup>
Solubility:	: Insoluble in water.
Partition coefficient:	: Not Available
Auto-ignition temperature:	: Not Available
Decomposition temperature:	: Not Available

### 9.2 Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This product is stable under normal conditions.

Safe under normal conditions

### 10.3 Possibility of hazardous reactions

Contact with chemical substances like acids or strong bases cause generation of gas. Keep away from any possible contact with water, because of violent reaction and possible flash fire.

### 10.4 Conditions to avoid

Not applicable.

### 10.5 Incompatible materials

Reacts with acid and water

## 10.6 Hazardous decomposition products

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When this product is used in a welding process, hazardous decomposition product would include those from volatilization, reaction or oxidation of the material listed in section 3 and those from the base metal and coating. The amount of fumes generated from this product varies with welding parameters and dimensions.

Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in section 3. Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quality of fumes and gases produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Signs and Symptoms of Overexposure:** Inhalation of welding fumes and gases can be dangerous to your health. Classification of welding fumes is difficult because of varying base materials, coatings, air contaminants and processes. The Internal Agency for Research on Cancer has classified welding fumes as possible carcinogenic to humans (Group 2B).

**Acute Effects:** Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. May cause sensitisation by skin contact

## SECTION 12: Ecology information

### 12.1 toxicity

Ecology - general: No information provide

Ecology- Water: No information provided

### 12.2 Persistence and degradability

Persistence and degradability: The welding rods consist of elements that can not degrade any further in the environment.

### 12.3 Bioaccumulative potential

Bioaccumulative potential: Welding rods contain heavy metals which bio accumulates in the food chain. The following figures are the bio concentration factor (BCF) for the substances on their own.

BCF: Aluminum, BCF: 18

### 12.4 Mobility in soil

Ecology - Soil: Welding rods are not soluble in water or soil. Particles formed by working welding rods can be transported in the air.

### 12.5 Results of PBT and vPvB

#### assessment

Component- N/A

### 12.6 Other adverse effects

Other adverse effects: In massive form, welding rods present no hazards to the aquatic environment. Welding materials could degrade into components originating from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## SECTION 13: Disposal consideration

### 13.1 Waste treatment methods

Regional legislation (waste):	Disposal must be done according to official regulations
Waste treatment methods:	Dispose of contents/container in accordance with licensed collectors sorting instructions
Waste disposal recommendations:	Dispose of contents/container to a hazardous or special waste facility.

**SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

**14.1 UN number**

UN-No. (ADR)	Not applicable
UN-No. (IMDG)	Not applicable
UN-No. (IATA)	Not applicable
UN-No. (ADN)	Not applicable
UN-No. (RID)	Not applicable

**14.2 UN proper shipping name**

Proper shipping name (ADR)	Not applicable
Proper shipping name (IMDG)	Not applicable
Proper shipping name. (IATA)	Not applicable
Proper shipping name (ADN)	Not applicable
Proper shipping name (RID)	Not applicable

**14.3 Transport hazard class(es)**

ADR	
Transport hazard class(es)	Not Applicable
IMDG	
Transport hazard class(es)	Not Applicable
IATA	
Transport hazard class(es)	Not Applicable
ADN	
Transport hazard class(es)	Not Applicable
RID	
Transport hazard class(es)	Not Applicable

**14.4 Packing group**

Packing group (ADR)	Not applicable
Packing group (IMDG)	Not applicable
Packing group (IATA)	Not applicable
Packing group (ADN)	Not applicable
Packing group (RID)	Not applicable

**14.5 Environmental hazards**

Dangerous for the environment	No
Marine pollutant	No
Other information	No supplementary information available

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance**

## 15.1.1 EU-regulations

No additional information available

## 15.1.2 National regulations

No additional information available

**15.2 Chemical safety assessment**

No USA: Under the OSHA Hazard Communication Standard, this product is considered hazardous. This product contains or produces a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5 et seq.) United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.

**SECTION 16: Other information**

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Full text of H- and EUH- statements:

Hazard Statements:

H228 – Flammable solid

H261 – In contact with water releases flammable gas.

R-Phrases:

R11 – Highly flammable

R15 – Contact with water liberates extremely flammable gases.

S-Phrases:

S61 – Avoid release to the environment.

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\*This information must be included in all SDS that are copied and distributed for this material.

Please retain this sheet for your files. SolderWeld, Inc. maintains a file of Safety Data Sheets (SDS) for each rods and fluxes produced in compliance with Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) & various right-to-know laws.

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to SolderWeld, Inc. at the time of issue. It is our policy to include an SDS with initial orders for each product. This submission is to become a matter of record and need not accompany subsequent shipments for the same product to the same customer. The information contained on this sheet is intended solely for employee health and safety education and not for contract specification purposes. No warranty, guarantee, or representation is made by SolderWeld, Inc., nor does SolderWeld, Inc. assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances. Should you need additional information, contact us.



**SAFETY DATA SHEET**

SDS Name: Alloy Sol Flux  
SolderWeld, Inc.

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**SECTION I: Identification of the substance/mixture and the company**

**1.1 Product Identifier**

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Product name Alloy Sol Flux

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**1.2 Relevant Identified uses of the substance and uses advised against**

**1.2.1 Relevant identified uses**

Main use category : Professional Use  
Industrial/Professional use spec : For Professional use only  
Use of substance : Brazing, soldering, and welding products, flux products

**1.2.2 Uses advised against**

No additional information available

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**1.3 Details of Supplier of the Safety Data Sheet**

SolderWeld, Inc.  
2050 N 300 W #72  
Spanish Fork, UT 84660  
USA  
800-356-8449  
info@solderweld.com

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**1.4 Emergency Telephone Number**

Emergency Number : 001-800-424-9300 (Chemtrec)

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**SECTION 2: Hazards Identification**

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**2.1 Classification of the substance**

**CLP/GHS Classification (1272/2008):**

Acute Toxicity – Oral, Category 4  
Skin Corrosion, Category 1B  
Specific Target Organ Toxicity (Single Exposure), Category 3  
Hazardous to the Environment – Long-Term, Category 2

**EU Classification (67/548/EEC):**

Harmful (Xn), Irritant (Xi), Dangerous for the Environment (N), R22, R36/37/38, R51/53

**Hazardous Classification per 29CFR 1910.1200 (Rev. July 1, 2012):**

Acute Toxicity – Oral, Category 4  
Skin Corrosion, Category 1B  
Specific Target Organ Toxicity (Single Exposure), Category 3  
Hazardous to the Environment – Long-Term, Category 2

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**Adverse physicochemical, human health and environmental effects**

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**2.2 Label elements**

Hazard pictograms (CLP)



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Signal word (CLP) : Danger

 Hazardous ingredients : Lithium Chloride  
 Zinc Chloride  
 Sodium Fluoride

 Hazard statements (CLP) : 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 (CLP) : P261 – Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P264 – Wash skin and hair thoroughly after handling.  
 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/protective clothing/eye protection/face protection.  
 P301+P330+P331 – IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 P303+P361+P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.  
 P304+P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes.  
 P310 – Immediately call a POISON CENTER or doctor/physician.  
 P330 – Rinse mouth.  
 P363 – Wash contaminated clothing before reuse.  
 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

No additional information available

## SECTION 3: Hazards Identification

### 3.1 Mixture

Chemical Identity	CAS #	Range %	OSHA PEL (mg/m3)	Carcinogenicity	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)	Hazardous Classification per 29CFR 1910.1200 (Rev. July, 2012)
Lithium Chloride	7447-41-8	30-45	NA	No	 (Xn) R22	(H302) Acute Tox. 4  (H315) Skin Irrit.. 2  (H319) Eye Irrit.. 2A  (H335) STOT SE 3 	(H302) Acute Tox. 4  (H315) Skin Irrit.. 2  (H319) Eye Irrit.. 2A  (H335) STOT SE 3 
Zinc Chloride	7646-85-7	6-10	1 PPM	No	 (Xn) R22  	(H302) Acute Tox. 4  (H314) Skin Corr. 1B  (H410) Aquatic C. 1 	(H302) Acute Tox. 4  (H314) Skin Corr. 1B  (H410) Aquatic C. 1 
Potassium Chloride	7447-40-7	30-45	10 PPM	No	Not Dangerous	Not Hazardous	Not Hazardous
Sodium Fluoride	7681-49-4	10-25	2.5 PPM	No	 (Xn)	(H301) Acute Tox. 3  (H315) Skin Irrit.. 2  (H319) Eye Irrit.. 2A 	(H301) Acute Tox. 3  (H315) Skin Irrit.. 2  (H319) Eye Irrit.. 2A 
Sodium Chloride	7647-14-5	8-13	10 PPM	No	Not Dangerous	Not Hazardous	Not Hazardous

**SECTION 4: First aid measures**

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**4.1 Description of first aid measures**

First aid measures general:

First aid measures after inhalation: Remove to fresh air immediately or administer oxygen. Get medical attention immediately.

First aid measures after skin contact: Flush skin with large amounts of water. Get medical attention if conditions persist.

First aid measures after eye contact: Flush eyes with water for at least 10 minutes. Get medical attention.

First aid measures after ingestion: Obtain medical attention immediately if ingested. Rinse mouth.

**4.2 Most important symptoms and effects, both acute and delayed**

Symptoms/injuries after inhalation: : May cause respiratory irritation.

Symptoms/injuries after skin contact: : May cause moderate irritation.

Symptoms/injuries after eye contact: : May cause eye irritation.

Symptoms/injuries after ingestion: : Harmful if swallowed.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

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

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the mixture**

Fire hazard: Chloride and fluoride fumes with high heat. Hydrogen Chloride Gas, Zinc/zinc oxides, Potassium Oxides, Sodium Oxides

Explosion hazard: No additional information provided

Reactivity in case of fire: No additional information provided

Hazardous decomposition

products in case of fire: No additional information provided

**5.3 Advice for firefighters**

Precautionary measure fire: No additional information provided

Firefighting instructions: No additional information provided

Protection during firefighting: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

General measures:

**6.1.1 For non-emergency personnel**

Protective equipment: Wear suitable protective clothing, gloves and eye or face protection.

Emergency procedures: Ventilate area. Avoid contact with skin and eyes. Avoid breathing dust/fume.

Measures in case of dust release: Where excessive dust may result, use approved respiratory protection equip.

**6.1.2 For emergency responders**

Protective equipment: Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye or face protection. For further

information refer to section 8: "Exposure controls/personal protection". Avoid contact with skin and eyes. Avoid breathing dust/fume.

Emergency procedures:

Evacuate unnecessary personnel. Ventilate area.

## 6.2 Environmental precautions

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Avoid release to the environment.

## 6.3 Methods and material for containment and cleaning up

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For containment:

No special measures required.

Methods for cleaning up:

Recover mechanically the product. This material and its container must be disposed of in a safe way and as per local legislation.

Other information:

Dispose of in accordance with relevant local regulations. This material and its container must be disposed of as hazardous waste.

## 6.4 Reference to other sections

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For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer section 13: "Disposal considerations".

## SECTION 7: Handling and storage

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### 7.1 Precautions for safe handling

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Precautions for safe handling:

Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume.

Hygiene measures:

Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

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

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Technical measures:

Ensure adequate ventilation, especially in confined areas.

Storage conditions:

Store locked up. Store in well-ventilated place. Keep cool

Incompatible products:

Acetylene, ammonia, ammonium nitrate, aqua regia, dioxane, ethylene oxide, chlorine trifluoride, halogens, hydrogen peroxide, hydrazine, mononitrate, hydrazoic acid, hydroxylamine, hydrogen sulfide, performic acid, phosphorus, selenium, sulfur, titanium plus potassium chlorate, bromates chlorates and iodate of alkali and alkali earth metals.

Storage area:

Store in a well-ventilated area.

Packaging materials:

Keep only in original container.

### 7.3 Specific end use

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Other hot work operations with metals.

## SECTION 8: Exposure controls/personal protection

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### 8.1 Control parameters

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The usual precautionary measures for handling chemicals should be followed. Keep away from food, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before break and at the end of the work. Store all protective clothing separately. Maintain an ergonomically appropriate working environment. Wear protective equipment. Keep unprotected persons away. Avoid causing dust.

### 8.2 Exposure controls

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Appropriate engineering controls:

Provide adequate general and local exhaust ventilation

Personal protective equipment:

Combined gas/dust mask with filter type P3. Gloves. Safety glasses.

Materials for protective clothing: Protective clothing.  
 Hand protection: Wear suitable protective clothing  
 Eye protection: Protective gloves  
 Skin and body protection: Safety glasses.  
 Respiratory protection: Wear suitable protective clothing  
 Combined gas/dust mask with filter type P3



Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	- Powder
Appearance:	- White
Color:	- Odourless
Odor:	- Not Available
Odor Threshold:	- Not Available
pH:	- Not Available
Relative evaporation rate:	- 500° C
Melting point:	- Not Available
Freezing point:	- N/A
Boiling point:	- Not Available
Flash point:	- Not Available
Auto-ignition temp:	- Not Available
Decomposition temperature:	- Not Available
Flammability (solid, gas):	- NA
Vapor pressure:	- NA
Relative vapor density at 20 C:	- Not Available
Relative density:	- 1%
Solubility:	- Not Available
Log pow:	- Not Available
Viscosity, kinematic:	- Unlimited
Viscosity, dynamic:	- Exothermic.
Explosive properties:	- Not Available
Oxidizing properties:	- Not Available
Explosive limits:	- Not Available

### 9.2 Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No additional information available

Safe under normal conditions

### 10.3 Possibility of hazardous reactions

Hydrogen chloride fumes, fluorides with high heat.

### 10.4 Conditions to avoid

Excess heat or cold. Metals Contact with acids liberates very toxic gas.

### 10.5 Incompatible materials

Glass or porcelain.

## 10.6 Hazardous decomposition products

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## SECTION 11: Toxicological information

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### 11.1 Information on toxicological effects

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**Acute Effects:** Lithium Chloride is an antidepressant/antipsychotic and may affect behavior/Central Nervous System (drowsiness, mental confusion, somnolence, muscle weakness, contraction, spasticity, tremors) if ingested in high doses.

**Eye Contact:** may cause severe irritation with possible eye burns and irreversible eye injury. Also it may cause corneal ulceration, chemical conjunctivitis, and opacification, and glaucoma and severe iritis.

**Skin Contact:** Causes skin irritation with possible burns, especially if skin is wet or moist. Also it may be absorbed by the skin. Inhalation: may cause severe respiratory tract irritation, headache, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), delayed lung edema, bronchial asthma. Inhalation of fumes may cause mental fume fever. It is characterized by flu-like symptoms (fever, chills, cough, muscle pain, weakness), chest pain.

## SECTION 12: Ecology information

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### 12.1 toxicity

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No available data.

### 12.2 Persistence and degradability

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Persistence and degradability: No available data.

### 12.3 Bioaccumulative potential

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Bioaccumulative potential: No available data.

### 12.4 Mobility in soil

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Ecology - Soil: No available data.

### 12.5 Results of PBT and vPvB assessment

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**No available data.**

### 12.6 Other adverse effects

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Other adverse effects: No available data.

Additional information: No other effects known

## SECTION 13: Disposal consideration

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### 13.1 Waste treatment methods

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Regional legislation (waste):

Disposal must be done according to official regulations

Waste treatment methods:

Dispose of contents/container in accordance with licensed collectors sorting instructions

Waste disposal recommendations:

Dispose of contents/container to a hazardous or special waste facility.

**SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

**14.1 UN number**

UN-No. (ADR)	UN1759
UN-No. (IMDG)	Not applicable
UN-No. (IATA)	Not applicable
UN-No. (ADN)	Not applicable
UN-No. (RID)	

**14.2 UN proper shipping name**

Proper shipping name (ADR)	Corrosive solid, NOS,
Proper shipping name (IMDG)	Not applicable
Proper shipping name. (IATA)	Not applicable
Proper shipping name (ADN)	Not applicable
Proper shipping name (RID)	Not applicable

**14.3 Transport hazard class(es)**

ADR	
Transport hazard class(es)	8
IMDG	
Transport hazard class(es)	Not Applicable
IATA	
Transport hazard class(es)	Not Applicable
ADN	
Transport hazard class(es)	Not Applicable
RID	
Transport hazard class(es)	Not Applicable

**14.4 Packing group**

Packing group (ADR)	III
Packing group (IMDG)	Not applicable
Packing group (IATA)	Not applicable
Packing group (ADN)	Not applicable
Packing group (RID)	Not applicable

**14.5 Environmental hazards**

Dangerous for the environment	No
Marine pollutant	No
Other information	No supplementary information available

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance**

15.1.1 EU-regulations

15.1.2 National regulations

No additional information available

**15.2 Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information**

Full text of H- and EUH- statements:

## Hazard Statements:

H301 – Toxic if swallowed.  
H302 – Harmful if swallowed.  
H314 – Causes severe skin burns and eye damage.  
H315 – Causes skin irritation.  
H319 – Causes serious eye irritation.  
H335 – May cause respiratory irritation.  
H410 – Very toxic to aquatic life with long lasting effects  
H411 – Toxic to aquatic life with long lasting effects.

## R-Phrases:

R22 – Harmful if swallowed.  
R25 – Toxic if swallowed.  
R34 – Causes burns.  
R36/38 – Irritating to eyes and skin.  
R36/37/38 – Irritating to eyes, respiratory system and skin.  
R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## S-Phrases:

S22 – Do not breathe dust.  
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.  
S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S60 – This material and its container must be disposed of as hazardous waste.  
S61 – Avoid release to the environment.

\*This information must be included in all SDS that are copied and distributed for this material.

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