

# Safety Data Sheet

## According to 1907-2006/EC, Article 31

Version: 1.0

### 1. Chemical Product & Company Information

**Product Name:** Action Tin  
**Details of the supplier of the safety data sheet:**  
This Safety Data Sheet has been updated in accordance with the Globally Harmonized System (GHS).  
**Manufacturer Name:** Canfield Technologies/BOW Electronic Solders  
**Address:** 1 Crossman Road, Sayreville, NJ 08872  
**General Phone Number:** 732-316-2100  
**INFOTRAC** 24 Hour Emergency Telephone Number: 1-800-535-5053  
**SDS Creation Date** 6-Jan-15  
**SDS Revision Date:** 6-Jan-15

### 2. Hazard Identification

**Classification of the substance or mixture**  
**Classification according to Regulation (EC) No 1272/2008**



GHS08 Health Hazard

STOT RE 2 **H373** May cause damage to organs through prolonged or repeated exposure.



GHS05

Skin corr. 1A **H314** Causes severe skin burns and eye damage.



GHS07

STOT SE 3 **H335-H336** May cause respiratory irritation. May cause drowsiness or dizziness.

#### Label elements

**Labeling according to Regulation (EC) No 1272/2008**

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

#### Hazard pictograms



GHS05



GHS07



GHS08

#### Signal word Danger

#### Hazard statements

**H314** Causes severe skin burns and eye damage.

**H335-H336** May cause respiratory irritation. May cause drowsiness or dizziness.

**H373** May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

**P280** Wear protective gloves/protective clothing/eye protection/face protection.

**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,

**P301-P330+P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**P402+P404** Store in a dry place. Store in a closed container.

**P501** Dispose of contents/container in according with local/regional/national regulations.

#### Other hazards

#### Results of PBT and vPvB assessment

PBT : Not applicable

vPvB: Not applicable





### 3.Composition/ information on ingredients

#### Chemical characterization: Mixtures

**Description:** Mixtures of the substances listed below with nonhazardous additions.

#### Chemical components:

Percentage %

<b>CAS: 7440-31-5</b> <b>EINECS:231-141-8</b>	Tin				39.5-41.5%
<b>CAS: 7439-92-1</b> <b>EINECS: 231-100-4</b>	Lead		Repr. 1A, <b>H360</b> ; STOT RE 2, <b>H373</b> Aquatic Chronic 2, <b>H411</b> Acute Tox. 4, <b>H302</b> ; Acute Tox. 4, <b>H332</b>		59.5-60.5%
<b>Flux Content :</b> <b>CAS: 7646-85-7</b> <b>EINECS: 231-592-0</b>	Zinc chloride		Skin Corr. 1B <b>H314</b> ; Eye Dam. 1 <b>H318</b> Acute Tox. 4, <b>H302</b>		50-60%
<b>CAS: 12125-02-9</b> <b>EINECS: 235-186-4</b>	Ammonium chloride		Acute Tox. 4, <b>H302</b> <b>Eye Irrit. H319</b>		3-5%
<b>CAS No. 7772-99-8</b>	Stannous Chloride		Skin Corr. 1B <b>H314</b> Acute Tox. 4, <b>H302</b> ; STOT SE 3, <b>H335</b>		3-5%
<b>CAS: 7732-18-5</b> <b>EINECS: 231-791-2</b>	Water				10-20%

#### Additional information:

This solder flux product does not contain any Substance of Very High Concern (SVHC) on the European Chemicals Agency (ECHA) Candidate list.

### 4. First Aid

#### Description of first aid measures

**After inhalation:** Supply fresh air, consult doctor in case of complaints.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** Seek immediate medical advice.

#### Information for doctor:

Most important symptoms and effects, both acute and delayed.

Indication of any immediate medical attention and special treatment needed.

### 5. Firefighting

#### Extinguishing media

#### Suitable extinguishing agents:

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (Nox)

Carbon dioxide (CO<sub>2</sub>)

#### Advice for fire fighters

**Protective equipment:** Wear self-contained respiratory protective device.

## 6. Accidental Release Measures

**Personnel Precautions:** Evacuate area and keep unnecessary and unprotected personnel from entering the area.

**Personal precautions, protective equipment and emergency procedures:** Ensure adequate ventilation.

**Environmental precautions:** Do not allow to enter sewers/surface or ground water.

**Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Melted solder will solidify on cooling and can be scraped up. Use caution to avoid breathing fumes if a gas torch is used to cut up large pieces.

**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

**Handling:**

**Precautions for safe handling:** Prevent formation of dust.

Ensure good ventilation/exhaustion at the workplace.

**Information about protection against explosions and fires:** No special measures required.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store in a cool location.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in dry conditions.

Exposure to sulfur or to high humidity will tarnish solder surface.

**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 item 7.

**Control parameters**

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

**CAS: 7646-85-7 Zinc chloride**

**WEL** Short-term value: 2mg/m<sup>3</sup>  
Long-term value: 1mg/m<sup>3</sup>

**CAS: 12125-02-9 Ammonium chloride**

**WEL** Short-term value: 20mg/m<sup>3</sup>  
Long-term value: 10mg/m<sup>3</sup>

**Exposure controls**

**Personal protective equipment:**

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

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 and skin.

**Respiratory protection:**

When ventilation is not sufficient to remove fumes from the breathing zone, a NIOSH safety approved respirator or

Self-contained breathing apparatus should be worn. Consult with local procedures for selection, training, inspection and

Maintenance of the personal protective equipment.

**Protection of hands:**



**Protective gloves**

**Material of gloves:**

**Nitrile rubber, NBR**

**Natural rubber, NR**

**Penetration time of glove material:**

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

**Eye protection:**



Face Shield or Safety glasses



Apron

## 9. Physical & Chemical Properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance

**Form:** Liquid  
**Color:** Colorless to light yellow  
**Odor:** Mild  
**pH-value at 20 °C:** <1

##### Change in condition

**Melting point/melting range:** Undetermined.  
**Boiling point/ Boiling range:** 104°C  
**Flash point:** Undetermined.  
**Self- igniting:** Product is not self igniting.  
**Danger of explosion:** Product does not present an explosion hazard.  
**Density at 20°C ( 68°F ):** 1.51 g/cm<sup>3</sup>  
**Vapor pressure at 20°C:** 23 hPa  
**Solubility in / miscibility with water:** Fully miscible.

## 10. Stability & Reactivity

### Reactivity

#### 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:** Strong acids, strong oxidizers.

#### Hazardous decompositions products:

Hydrogen chloride (HCL)

Zinc oxides

## 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)

##### CAS: 12125-02-9 Ammonium Chloride

Oral : LD50 1650 mg/kg (rat)

##### CAS: 7647-01-0 Hydrochloric Acid

Oral : LD50 900 mg/kg (rabbit)

#### Primary irritant effects:

**Skin corrosion/irritation:** Strong caustic effect on skin and mucous membranes.

**Serious eye damage/irritation:** Strong irritant with the danger of severe eye injury.

#### Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and the danger of perforation of esophagus and stomach.

## 12. Ecological Information

**Toxicity:** No ecotoxicity data was found for the product.

**Aquatic toxicity:** No environmental information found for this product.

### Additional ecological information

#### General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

#### Result of PBT and vPvB assessment

**PBT:** Not applicable.

**VPvB:** Not applicable.

## 13. Disposal Considerations

### Waste treatment methods

#### Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made in accordance with official regulations.

#### Uncleaned packaging's

**Recommendations:** Disposal must be made in accordance with official regulations.

## 14. Transport Information

### UN- NUMBER

**IMDG, IATA** UN3264

### UN proper shipping name

**ADR, IMDG, IATA** UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE, HYDROCHLORIC ACID), 8, III

### Transport hazard class (es)

#### ADR, IMDG, IATA



**Class** 8 Corrosive substances.

**Label** 8

#### Packing group

**ADR, IMDG, IATA** III

**Environmental hazards:** Not applicable.

**Marine pollutant:** No

**Special precautions for user** Not applicable.

**Danger code (kemler):** 80

**EMS Number:** F-A, S-B

**Segregation groups** Acids

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

#### Transport/Additional information:

**Limited quantities (LQ)** 5L

**Excepted quantities (EQ)** Code: E1

Maximum net quantity per inner package: 30 ml

Maximum net quantity per outer package: 1000 ml

**Transport category** 3

**Tunnel restriction code** E

#### IMDG

**Limited quantities (LQ)** 5L

**Excepted quantities (EQ)** Code: E1

Maximum net quantity per inner package: 30 ml

Maximum net quantity per outer package: 1000 ml

**UN " Model Regulation" :** UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE, HYDROCHLORIC ACID), 8, III

## 15. Regulatory Information

### Safety, Health and Environmental regulation/ legislation specific for the substance or mixture

#### All ingredients are listed on the following Government Inventories:

- China:** Inventory of Existing Chemical Substances in China (IECSC)  
**Korea:** Korea Existing Chemicals List (ECL)  
**Europe:** European Inventory of Existing Commercial Substances (EINECS)  
**Japan:** Inventory of Existing and New Chemical Substances (ENCS)  
**Philippines:** Philippine Inventory of Chemicals and Chemical Substances (PICCS)  
**USA:** TSCA (Toxic Substances Control Act) TSCA Inventory of Chemical Substances

USA The following information relates to product regulation specific to the USA.

#### Labeling according to Regulation (EC) NO 1272/2008

The product has classified and labeled according to the CLP regulation.

Hazard pictograms



GHS05



GHS07



GHS08

#### Signal word Danger

#### Hazard statements

- H314** Causes severe skin burns and eye damage.  
**H335-H336** May cause respiratory irritation. May cause drowsiness or dizziness.  
**H373** May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

- P280** Wear protective gloves/protective clothing/eye protection/face protection.  
**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.  
**P301-P330+P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
**P402+P404** Store in a dry place. Store in a closed container.  
**P501** Dispose of contents/container in accordance with local/regional/national regulations.

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

## 16. Additional Information

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Bow/Canfield Technologies extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The on this Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet as a source for hazard information.

**Department issuing Safety Data Sheet (SDS):** Product Compliance / EHS Department

#### Abbreviations and acronyms:

- ADR:** 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 Labeling of Chemicals.  
**EINECS :** European Inventory of Existing Commercial Substances  
**ELINCS:** European List of Notified Chemical Substances  
**CAS: Chemical Abstracts Service** (Division of the American Chemical Society)  
**LC50:** Lethal concentration, 50 percent.  
**LD50:** Lethal dose, 50 percent  
**Acute Tox. 4:** Acute toxicity, Hazard Category 4  
**Skin Corr. 1A:** Skin corrosion/irritation, Hazard Category 1  
**Skin Corr. 1B:** Skin corrosion/irritation, Hazard Category 2  
**Eye Dam. 1 :** Serious eye damage/eye irritation, Hazard Category 1  
**Eye Irrit. 2:** Serious eye damage/eye irritation, Hazard Category 2  
**STOT SE 3:** Specific target organ toxicity- Single exposure, Hazard Category 3  
**STOT RE 2:** Specific target organ toxicity- Single exposure, Hazard Category 2

\*Data compared to the previous version altered.