

**Safety Data Sheet**  
According to 1907-2006/EC, Article 31      Version: 1.0

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Trade Name:** 40Sn/60Pb Bar and Wire Solder

**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. HAZARDS IDENTIFICATION**

**Classification of the substance or mixture**

**Classification according to Regulation (EC) NO 1272/2008**



GHS08 Health Hazard

Resp.Sens. 1B **H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Repr. 1A **H360** May damage fertility or the unborn child.

STOT RE2 **H373** May cause damage to organs through prolonged or repeated exposure.



GHS09 Environment

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



GHS07

Acute Tox. 4 **H302** Harmful if swallowed.

Acute Tox. 4 **H332** Harmful if inhaled.

**Label elements**

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

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

Hazard pictograms



GHS08

GHS07

GHS09

Signal word **Danger**

Hazard-determining components of labeling:

**Lead**

Hazard Statements

**H302+H332** Harmful if swallowed or inhaled.

**H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**H360** May damage fertility or the unborn child.

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

**H411** Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**P260** Do not breathe dust/fume/gas/mist/vapors/spray.

**P273** Avoid release to the environment.

**P264** Wash thoroughly after handling.

**P301+P312** If swallowed: Call a POISON CENTER or doctor/ physician if you feel unwell.

**P405** Store locked up.

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

**Hazard description:**

**VHMIS HAZARD Symbols**

D2A-Very toxic material causing other toxic effects.



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

Health = 2  
Fire = 1  
Reactivity = 0



Health = 2  
Fire = 1  
Reactivity = 0

**Other hazards****Results of PBT and vPvB assessment**

PBT : Not applicable

vPvB: Not applicable

**3. COMPOSITION OF MIXTURE****Chemical characterization: Mixtures****Description:** Mixtures of the substances listed below with nonhazardous additions.

CAS No.	Description		% Range
CAS: 7440-31-5	Tin		39.5-41.5%
EINECS:231-141-8			
CAS: 7439-92-1	Lead		58.5-60.5%
EINECS: 231-100-4			

**Additional information:**

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

Composition and weight percent of solder alloys varies widely and can be determined by product label.

**4. FIRST AID MEASURES****Description of first aid measures****After inhalation:**

In case of unconsciousness place patient in side position for transportation.

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:**

Induce vomiting, if person is conscious. Seek medical help.

Seek immediate medical advise.

**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. FIREFIGHTER MEASURES****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)

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

Melted solder above 1000°F will liberate toxic lead fumes and aliphatic aldehydes

**Advice for fire fighters**

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

**6. ACCIDENTAL RELEASE MEASURES**

**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 of 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.

**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

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

#### Tin 7440-31-5

**PEL** 2mg/m<sup>3</sup>  
Metal

**REL** 2mg/m<sup>3</sup>

**TLV** 2mg/m<sup>3</sup>  
Metal

#### Lead 7493-92-1

**PEL** 0.05 mg/m<sup>3</sup>  
\*see 29 CFR 1910.1025

**REL** 0.05 mg/m<sup>3</sup>  
excluding lead arsenate; see Pocket guide APP. C

**TLV** 0.05mg/m<sup>3</sup>  
\*and inorganic compounds, as Pb; BEI

### Additional information:

**PEL**= Permissible Exposure Limit (OSHA)

**TLV** = Threshold Limit Value (ACGIH)

**OSHA** = Occupational Safety and Health Administration

**ACGIH** = American Conference of Governmental Industrial Hygienists

### 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.

#### Breathing equipment:

**Exposure controls:** use appropriate engineering control such as process enclosures, local exhaust ventilation to control airborne levels below recommended exposure limits.

When ventilation is not sufficient to remove airborne levels 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**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### General Information

##### Appearance :

**Form:** Metal in wire, ribbon, or preformed shapes.  
**Color:** Silver grey  
**Odor:** Mild  
**pH-value:** Not determined.

##### Change in condition

**Melting point/melting range:** 184°C (363 °F )  
**boiling point/boiling range:** 1740°C (3164 °F)  
**Flammability (solid, gaseous):** Not determined.  
**Flash point :** Undetermined.  
**Auto igniting:** Product is not self igniting.  
**Vapor pressure:** Not applicable.  
**Danger of explosion:** Product does not present an explosion hazard.  
**Density at 20°C ( 68°F ):** 7 g/cm<sup>3</sup> (58.415 lbs/gal)  
**Solubility in / miscibility with Water:** Insoluble

## 10. STABILITY AND 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:**

Carbon monoxide and carbon dioxide

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

#### Acute toxicity:

LD/LC50 values that are relevant for classification:

Primary irritant effect:

On the skin:

Irritant to skin and mucous membranes.

Possible local irritation by contact with flux or fumes.

On the eye:

Irritant effect.

Smoke during soldering can cause eye irritation.

Through inhalation:

Flux fumes during soldering may cause irritation and damage of mucous membranes and respiratory system

Through ingestion: May be harmful if swallowed.

#### Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

Harmful

#### Carcinogenic categories

**IARC** (International Agency for Research on Cancer)

**Lead** 7439-92-1

**NTP** (National Toxicology Program)

**Lead** 7439-91-1

## 12. ECOLOGICAL INFORMATION

### Toxicity

**Aquatic toxicity:** No further relevant information available.

#### 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 according to official regulations.

##### Uncleaned packaging's:

Recommendations: Disposal must be made in accordance to official regulations.

### 14. TRANSPORT INFORMATION

<b>UN- NUMBER</b>	Not applicable.
<b>DOT,ADN, IMDG, IATA</b>	Not applicable.
<b>ADR</b>	Not applicable.
<b>UN proper shipping name</b>	Not applicable.
<b>DOT, ADN,ADR, IMDG, IATA</b>	Not applicable.
<b>Transport hazard class (es)</b>	
<b>DOT, IMDG</b>	Not applicable.
<b>Class</b>	Not applicable.
<b>ADR, ADN, IATA</b>	
<b>Class</b>	Not applicable.
<b>Packing group</b>	
<b>DOT, ADR, IMDG, IATA</b>	Not applicable.
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation"</b>	

### 15. REGULATORY INFORMATION

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

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

##### SARA (Superfund Amendments and Reauthorization Act)

Section 355 (extremely hazardous substances):

None of the ingredients is listed

Section 313 (Specific toxic chemical listings):

**Lead** 7439-92-1

**TSCA** (Toxic Substances Control Act): Canfield Technologies certifies that all components listed below for the subject finished

Product are on the TSCA Inventory of chemical Substance and are not subject to any chemical specific regulation under TSCA

Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

All ingredients are listed or exempt from listing.

##### California Proposition 65

Chemicals known to cause cancer:

WARNING: This product contains a chemical (s) known to the State of California to cause cancer.

##### Lead

Chemicals known to cause reproductive toxicity:

WARNING: This product contains a chemical (s) known to the State of California to cause birth defects and /or other

Reproductive harm.

##### Lead

##### Carcinogenic categories

**EPA** (Environmental Protection Agency)

**Lead** 7439-92-1

**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:

##### Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

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

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

Hazard pictograms



GHS07



GHS08



GHS09

Signal word Danger

Hazard-determining components of labeling:

Lead

#### Hazard statements

**H302+H332** Harmful if swallowed or inhaled.

**H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**H360** May damage fertility or the unborn child.

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#### Precautionary statement

**P260** Do not breathe dust/fume/gas/mist/vapors/spray.

**P273** Avoid release to the environment.

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**P405** Store locked up.

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

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

## 16. OTHER INFORMATION

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Bow and 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 information 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.

#### Abbreviations and acronyms:

**RID:** Regulations Concerning the International Transport of Dangerous Goods by Rail.

**ICAO:** International Civil Aviation Organization.

**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.

**NFPA:** National Fire Protection Association (USA).

**HMIS :** Hazardous Materials Identification System (USA).

**WHMIS:** Workplace Hazardous Materials Information System (Canada).

**LC50:** Lethal concentration, 50 percent.

**LD50:** Lethal dose, 50 percent

**\*Data compared to the previous version altered.**