



CANFIELD TECHNOLOGIES, LLC



ELECTRONIC SOLDERS



# Safety Data Sheet

According to 1907-2006/EC , Article 31

Revised 01/06/2018

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Silcan 0, Silcan 5 and Silcan 15  
**Trade name:** Phosphorus/Copper/Silver/Brazing Filler Metal  
**Product Use/Restriction:** Joining metal components by brazing  
**Manufacturer Name:** Canfield Technologies/BOW Electronic Solders/ Lukens Metals  
**Address:** 1 Crossman Road, Sayreville, NJ 08872  
**General Phone Number:** 732-316-2100  
**INFOTRAC** 24 Hour Emergency Telephone Number: 1- 1800-535-5053

**Website:** www.solders.com  
**SDS Creation Date** 6-Jan-15  
**SDS Revision Date:** 6-Jan-18

## 2. HAZARDS IDENTIFICATION

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.

### Classification of the substance or mixture

The product is not classified as hazardous according to the Globally Harmonized System (GHS).

### Additional information:

0 percent of the mixture consists of ingredient(s) of unknown toxicity.

There are no other hazards not otherwise classified that have been identified.

### Label elements

#### GHS label elements:

The product is not classified as hazardous according to the OSHA GHS regulations within the United States..

Hazard pictograms Not Regulated.

**Signal word:** Not Regulated.

**Hazard-determining components of labeling:** None.

**Hazard statement:** Not Regulated.

**Precautionary statement:** Not Regulated.

### Additional information

#### Other hazards which do not result in GHS classification:

Heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to brazing fume and gases can be hazardous.

Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product.

### Hazard description:

**WHMIS-symbols:** Not hazardous under WHMIS.

## 3. COMPOSITION OF MIXTURE

### Chemicals characterization: Mixtures

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

### Dangerous components:

Copper	7440-50-8	84-89%
Silver	7440-22-4	1-18%
Phosphorus	7723-14-0	5-9%

**Additional information's:**

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

**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.

#### 4. FIRST AID MEASURES

**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 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:**

As shipped, the product will not burn. In case of fire in the surroundings: use appropriate extinguishing agent.

**For safety reasons unsuitable extinguishing agents:** For metal fires use specific agents only.

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

infrared radiation from flame or hot metal can ignite combustibles and flammable products.

**Advice for fire fighters**

**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 full 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.

#### 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 contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### 7. HANDLING AND STORAGE

**Handling:**

Use with adequate ventilation. Avoid breathing vapor and fumes. Use only in accordance with directions.

**Storage:**

No special storage conditions required.

**Hygiene Practices:**

Do not permit eating, drinking, or use of cosmetics or tobacco products while handling or processing material or in solder work areas. Practice good oral hygiene procedures Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Avoid inhalation and ingestion of product, and activities which generate dust or fume. Keep melting / soldering temperatures as low as possible to minimize the generation of fume.

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

**Additional information about design of technical systems:** No further data; see item 7.

### Control parameters

#### Exposure guidelines:

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 TLV-TWA should be used as a guide in the control of health hazards and should not be indicate a fine line between safe and dangerous exposures.

See Section 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.

#### Components with limit with limit values that require monitoring at workplace:

These components may be present

#### Copper: 7440-50-8

PEL (USA)	Long-Term Value: 1* 0.1 **mg/m <sup>3</sup> as Cu *Dust and mists ** fume
REL (USA)	Long-Term Value: 1* 0.1 **mg/m <sup>3</sup> as Cu *Dust and mists ** fume
TLV (USA)	Long-Term Value: 1* 0.2 **mg/m <sup>3</sup> as Cu *Dust and mists ** fume
EL (Canada)	Long-Term Value: 1* 0.2 **mg/m <sup>3</sup> as Cu *Dust and mists ** fume
EV (Canada)	Long-Term Value: 0.2 * 1**mg/m <sup>3</sup> as Copper *fume; **Dust and mists
LMPE (Mexico)	Long-Term Value: 0.2* 1**mg/m <sup>3</sup> *humo (como Cu): ** polvo y niebla (como Cu).

#### Phosphorus 7723-14-0

REL (USA)	Long-Term Value: 0.1 mg/m <sup>3</sup>
LMPE (Mexico)	Short-Term Value: 0.3 mg/m <sup>3</sup>
	Long-Term Value: 0.1mg/m <sup>3</sup>

#### Silver 7440-22-4

REL (USA)	Long-Term Value: 0.01 mg/m <sup>3</sup>
REL (USA)	Long-Term Value: 0.01 mg/m <sup>3</sup>
TLV (USA)	Long-Term Value: 0.1 mg/m <sup>3</sup> metal: dust and fume
EL (Canada)	Short-Term Value: 0.03 mg/m <sup>3</sup>
	Long-Term Value: 0.01 mg/m <sup>3</sup> as Ag
EV (Canada)	Long-Term Value: 0.1* 0.01 **mg/m <sup>3</sup> *metal; **water-soluble compounds (as silver)
LMPE (Mexico)	Term Value: 0.1 mg/m <sup>3</sup> Metal, polvos y humos.

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

### 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. State Appearance:****General information:**

<b>Appearance:</b>	Solid material
<b>Color:</b>	According to product specification
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.
<b>Melting Point:</b>	Undetermined.
<b>Boiling point:</b>	Undetermined.
<b>pH-value:</b>	Not applicable.
<b>Flash Point:</b>	Not applicable.
<b>Flammability (solid, gaseous)</b>	Not determined.
<b>Auto-igniting temperature:</b>	Not determined.
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion Limits:</b>	Not applicable.
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not applicable.
<b>Density:</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapor density:</b>	Not applicable.
<b>Evaporation rate:</b>	Not applicable.
<b>Solubility in / miscibility with Water:</b>	Insoluble.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	Not applicable.
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Other information</b>	No further relevant information available.

**10. STABILITY AND REACTIVITY****Reactivity****Chemical stability:**

Stable under normal conditions , no hazardous reactions when kept from incompatibles.

Thermal decomposition /conditions to be avoided: No decomposition if used according to specifications.

**Possibility of hazardous reactions:**

Reacts with strong acids and alkali.

Reacts with strong oxidizing agents.

**Conditions to avoid:**

Avoid heat or contamination.

**Incompatible materials:**

No further relevant information available.

### **Hazardous decompositions products:**

Brazing fumes and gases cannot be classified simply. The composition and products: quantity of both are dependent upon The metal being joined, the process, procedure and filler metals and flux used.

Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being joined ( such as paint, plating, or galvanizing), the number of operators and the volume the work area, the quality and the amount of ventilation, the position of the operators head with respect to the fume and fumes from chemical fluxes used in some brazing operations.

When the wire or rod is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 3, plus those from the base metal and coating, etc., as noted above.

## **11. TOXICOLOGICAL INFORMATION**

### **Information on likely routes of exposure:**

#### **Ingestion:**

Unlikely route of exposure.

Health injuries from ingestion are not known or expected under normal use.

#### **Inhalation:**

Potential chronic health hazards related to the use of welding consumables are most applicable to the inhalation route of exposure.

#### **Skin Contact:**

Heat rays can burn skin.

#### **Eye Contact:**

Heat rays (infrared radiation from flame) or hot metal can injure eyes.

### **Information on toxicological effects:**

**Short-term (acute)** overexposure to brazing fumes may result in discomfort such as metal fume fever, dizziness, nausea, or eyes. or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems ( e.g. asthma, emphysema).

**Long-term (chronic)** overexposure to brazing fumes can lead to siderosis (iron deposits in lung), central nervous system Effects.

#### **Acute toxicity:**

LD/LC50 values that are relevant for classification: None

#### **Primary irritant effect:**

**On the skin:** No irritant effects.

**On the eye:** No irritant effects.

**In the respiratory system:** No irritating effect.

**Sensitization:** No sensitizing effects known.

#### **Additional toxicological information:**

Organic polymers may be used in the manufacture of various welding consumables.

Overexposure to their decomposition byproducts may result in a condition known as polymer fume fever.

Polymer fume fever usually occurs within 4 to 8 hours of exposure with the presentation of flu like symptoms, including mild Pulmonary irritation with or without an increase in body temperature.

Signs of exposure can include an increase in white blood cell count. Resolution of symptoms typically occurs quickly ,

Usually not lasting longer than 48 hours.

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

#### **Carcinogenic categories**

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

None of the ingredients is listed.

#### **NTP (National Toxicology Program)**

None of the ingredients is listed.

#### **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

#### **Other information relevant to carcinogenicity:**

Cancerous lesions have reported in persons exposed to arc rays.

**Gem cell mutagenicity:**

**In vitro:** Not classified.

**In vivo:** Not classified.

**Reproductive toxicity:** Not classified.

**Specific target organ toxicity- single exposure:** Not classified.

**Specific target organ toxicity- repeated exposure:** Not classified.

**Aspiration hazard:** Not classified.

**12. ECOLOGICAL INFORMATION**

**Persistence and degradability:**

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

**Behavior in environmental system**

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

**Additional ecological information:**

**General notes:**

Negative ecological effects are, according to the current state of knowledge, not expected.

**Result of PBT and vPvB assessment**

**PBT:** Not applicable.

**VPvB:** Not applicable.

**Other adverse effects:** No further relevant information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Recommendation:**

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

Disposal must be made according to official regulations.

**Uncleaned packaging's:**

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

**14. TRANSPORT INFORMATION**

**UN- NUMBER**

**DOT, ADR, IMDG, IATA** Not regulated

**UN proper shipping name**

**DOT, ADR, IMDG, IATA** Not regulated

**Transport hazard class (es)**

**DOT, ADR, IMDG, IATA**

**Class** Not regulated

**Packing group**

**DOT, ADR, IMDG, IATA** Not regulated

**Environmental hazards:**

**Marine pollutant:** No

**Special precautions for user** Not applicable

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

## 15. REGULATORY INFORMATION

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

#### US Federal regulation

None of the ingredients is listed

#### US. OSHA Specifically Regulated Substances (29CFR 1910.1001-1050)

None present or none present in regulated quantities.

#### SARA

##### Section 302 (Extremely Hazardous Substance)

Phosphorus 7723-14-0

##### Section 304 (emergency release notification)

Phosphorus 7723-14-0

##### Sections 311/312 (hazardous chemical threshold planning quantity in pounds)

None of the ingredients is listed

##### Section 313 (TRI repotting)

Copper: 7440-50-8

Silver 7440-22-4

##### Section 355 (Extremely Hazardous Substance):

Phosphorus 7723-14-0

##### CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

Copper: 7440-50-8

Silver 7440-22-4

Phosphorus 7723-14-0

##### TSCA (Toxic Substances Control Act)

All ingredients are listed.

##### Clean water Act section 311 hazardous substances) (40 CFR 117.3)

None present or none present in regulated quantities.

##### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

##### 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)

Copper: 7440-50-8

Silver 7440-22-4

Phosphorus 7723-14-0

##### TLV (Threshold Limit Value establish by ACGIH)

None of the ingredients is listed

##### NOISH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed

##### State Right to Know Listings

##### US. New Jersey Worker and Community Right-to-Know Act

Copper: 7440-50-8

Silver 7440-22-4

Phosphorus 7723-14-0

##### US. Massachusetts RTK- Substance List

##### Copper:

Silver

Phosphorus

##### US. Pennsylvania RTK- Hazardous Substances

##### Copper:

Silver

Phosphorus

##### US. Rhode Island RTK

**Copper:**

**Silver**

**Phosphorus**

**CANADA:**

**Canadian Controlled Products Regulations:**

Not hazardous under WHMIS.

**Canadian substance listings:**

**Canadian Domestic substance List (DSL):**

All ingredients are listed.

**Canadian Non-Domestic substance List (NDSL):**

None of the ingredients is listed

**Canadian Ingredients Disclosure List (Limits 0.1%)**

None of the ingredients is listed

**Canadian Ingredients Disclosure List (Limits 1%)**

None of the ingredients is listed

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

## 16. OTHER 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)

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