



Section 1: Identification

CHEMICAL/TRADE NAME:

Beryllium Copper Plunger Tips & Bodies

Revised: 25-Mar-16
Replaces: 01-Jul-15

SYNONYMS Semco BE-10s™
 Semco BE-20s™
 Semco BE-10s XLT™
 Semco BE-20s XLT™

CHEMICAL FAMILY Alloy

MANUFACTURER

Semco Inc.
1025 Pole Lane Road
Marion, Ohio 43302

FOR TRANSPORTATION EMERGENCY

Call Chemtrec at:
Domestic: (800) 424-9300
International: (703) 527-3887

FOR INFORMATION

Phone: (800) 848-5764
Fax: (740) 387-6127

FOR EMERGENCY

Call Semco Inc. at: (800) 848-5764
(740) 387-2229

Website: www.semcotips.com

E-mail: sales@semcotips.com

Section 2: Hazard(s) Identification

Physical hazards

Not classified.

Health hazards

Sensitization, respiratory

Category 1

Sensitization, skin

Category 1

Carcinogenicity

Category 1

Specific target organ toxicity, repeated exposure

Category 1 (Respiratory system)

Category 1

Environmental hazards

Not classified.

OSHA defined hazards

Not classified.

Label elements



Signal word

Danger

Hazard statement

May cause cancer by inhalation. May cause allergic skin reaction. May cause allergy or asthma symptoms or difficulties if inhaled. Causes damage to organs (respiratory system) through prolonged or repeated exposure.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust/fume. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

Response

If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and make comfortable for breathing. If exposed or concerned: Call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. If experiencing respiratory symptoms: Call a poison center/doctor. Wash contaminated clothing before reuse.

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national & international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

For further information, please contact Semco Inc. at (800) 848-5764



Section 3: Composition/Information on Ingredients

Mixtures

Chemical Composition (Percent by Weight)

Chemical	CAS Number	Semco BE-10s & BE-10s XLT	Semco BE-20s & BE-20s XLT
Beryllium	7440-41-7	.45-.55	1.90-2.15
Cobalt	7440-48-4	.35-.45	.45-.55
Nickel	7440-02-0	1.80-2.10	Trace
Copper	7440-50-8	Balance	Balance

Section 4: First Aid Measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Breathing difficulty caused by inhalation of particulate requires immediate removal to fresh air. If breathing has stopped, perform artificial respiration and obtain medical help.

Skin contact Before washing use a dry brush to remove dust from skin. Take off contaminated clothing and wash before reuse. Remove and isolate contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Immediately flush skin with plenty of water. Call a physician or poison control center immediately. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse. Thoroughly wash skin cuts or wounds to remove all particulate debris from the wound. Seek medical attention for wounds that cannot be thoroughly cleaned. Treat skin cuts and wounds with standard first aid practices such as cleansing, disinfecting and covering to prevent wound infection and contamination before continuing work. Obtain medical help for persistent irritation. Material accidentally implanted or lodged under the skin must be removed.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Flush eyes immediately with large amounts of water. Flush eyes with water as a precaution. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. Call a physician or poison control center immediately. Get medical attention if symptoms persist. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.

Ingestion IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Call a physician or poison control center immediately. Rinse mouth. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If ingestion of a large amount does occur, call a poison control center immediately. Get medical attention if symptoms occur. Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed May cause allergic skin reaction. Prolonged exposure may cause chronic effects.

Indication of Provide general supportive measures and treat symptomatically. In case of shortness of breath, give Semco Beryllium Copper Plunger Tips SDS Updated 03-25-16



**immediate medical
attention and
special treatment
needed**

oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Treatment of Chronic Beryllium Disease: There is no known treatment which will cure chronic beryllium disease. Prednisone or corticosteroids are the most specific treatment currently available. They are directed at suppressing the immunological reaction and can be effective in diminishing signs and symptoms of chronic beryllium disease. In cases where steroid therapy has had only partial or minimal effectiveness, other immunosuppressive agents, such as cyclophosphamide, cyclosporine, or methotrexate, have been used. These latter agents remain investigational. Further, in view of potential side effects of all the immunosuppressive medications, including steroids such as prednisone, they should be used only under the direct care of a physician. In general, these medications should be reserved for cases with significant symptoms and/or significant loss of lung function. Other symptomatic treatment, such as oxygen, inhaled steroids or bronchodilators, may be prescribed by some physicians and can be effective in selected cases.

The decision about when and with what medication to treat is a judgment situation for individual physicians. For the most part, treatment is reserved for those persons with symptoms and measurable loss of lung function. The value of starting oral steroid treatment, before signs or symptoms are evident, remains a medically unresolved issue.

The effects of continued low exposure to beryllium are unknown for individuals who are sensitized to beryllium or who have a diagnosis of chronic beryllium disease. It is generally recommended that persons who are sensitized to beryllium or who have CBD terminate their occupational exposure to beryllium.

**General
information**

If exposed or concerned: get medical attention/advice. Get medical attention if symptoms. As supplied, there is no immediate medical risk with beryllium products in massive form. First aid measures provided are related to particulate containing beryllium.

Section 5: Fire Fighting Measures

**Suitable
extinguishing
media**

The product is non-combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable
extinguishing
media**

Do not use water to extinguish fires around operations involving molten metal due to the potential for steam explosions.

**Specific hazards
arising from the
chemical**

Not applicable.

**Special protective
equipment and
precautions for
firefighters**

Firefighters should wear full protective clothing including self contained breathing apparatus. Wear suitable protective equipment.

**Fire fighting
equipment &
instructions**

Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

Specific methods

Pressure-demand self-contained breathing apparatus must be worn by firefighters or any other persons potentially exposed to the particulate released during or after a fire.

Section 6: Accidental Release Measures

**Personal precautions,
protective equipment
and emergency
procedures**

Local authorities should be advised if significant spillages cannot be contained. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

Methods and

This material is classified as a water pollutant under the Clean Water Act and should be prevented



materials for containment and cleaning up from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is a risk. Collect spillage. Dike far ahead of the spill for later disposal. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust/fume. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Wash thoroughly after handling. When using, do not eat, drink or smoke. Contaminated work clothing must not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities Keep locked-up. Avoid contact with acids and alkalies. Avoid contact with oxidizing agents.

Section 8: Exposure Controls, Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Copper (CAS 7440-50-8)	PEL	1mg/m3	Dust and Mist
		0.1mg/m3	Fume
Cobalt (CAS 7440-48-4)	PEL	0.1mg/m3	Dust and Fume
Nickel (CAS 7440-02-0)	PEL	0.1mg/m3	

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value	Form
Beryllium (CAS 7440-41-7)	Ceiling	0.005mg/m3	
	TWA	0.002mg/m3	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0.00005mg/m3	Inhalable fraction

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Beryllium (CAS 7440-41-7)	Ceiling	0.0005mg/m3	Dust and Fume
Cobalt (CAS 7440-48-4)	TWA	0.05mg/m3	
Copper (CAS 7440-50-8)	TWA	1mg/m3	
		0.1mg/m3	Dust and Mist
Nickel (CAS 7440-02-0)	TWA	0.15mg/m3	Fume
		0.015mg/m3	

Biological limit values No biological exposure limits noted for the ingredient(s)

Control parameters WET METHODS: Machining operations are usually performed under a liquid lubricant/coolant flood which assists in reducing airborne particulate. However, the cycling through of machine coolant containing finely divided particulate in suspension can result in concentration building to a point where the particulate may become airborne during use. Certain processes such as sanding and grinding may require complete hooded contained and local exhaust ventilation. Prevent coolant from splashing onto floor areas, external structures or operators' clothing. Utilize a coolant filtering system to remove particulate from the coolant.

WORK PRACTICES: Develop work practices and procedures that prevent particulate from coming in



contact with worker skin, or personal clothing. If work practices and/or procedures are ineffective in controlling airborne exposure or visual particulate from deposition on skin, hair, or clothing, provide appropriate cleaning/washing facilities. Procedures should be written that clearly communicate the facility's requirements for protective clothing and personal hygiene. These clothing and personal hygiene requirements help keep particulate from being spread to non-production areas or from being taken home by the worker. Never use compressed air to clean work clothing or other surfaces.

Fabrication processes may leave residue of particulate on the surface of parts, products or equipment that could result in employee exposure during subsequent material handling activities. As necessary, clean loose particulate from parts between processing steps. As a standard hygiene practice, wash hands before eating or smoking.

HOUSEKEEPING: Use vacuum and wet cleaning methods for particulate removal from surfaces. Be certain to de-energize electrical systems, as necessary, before beginning wet cleaning. Use vacuum cleaners with high efficiency particulate air (HEPA). Do not use compressed air, brooms, or conventional vacuum cleaners to remove particulate from surfaces as this activity can result in elevated exposures to airborne particulate. Follow the manufacturer's instructions when performing maintenance on HEPA filtered vacuums used to clean hazardous materials.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate dust, mist or fume.

Skin protection
Hand protection

Wear gloves to prevent contact with particulate or solutions. Wear gloves to prevent metal cuts and skin abrasions during handling.

Other

Protective overgarments or work clothing must be worn by persons who may become contaminated with particulate during activities. Skin contact with this material may cause, in some sensitive individuals, an allergic dermal response. Particulate that becomes lodged under the skin has the potential to induce sensitization and skin lesions.

Respiratory protection When airborne exposures exceed or have the potential to exceed the occupational exposure limits, approved respirators must be used as specified by an Industrial Hygienist or other qualified professional. Respirator users must be medically evaluated to determine if they are physically capable of wearing a respirator. Quantitative and/or qualitative fit testing and respirator training must be satisfactorily completed by all personnel prior to respirator use. Users of a tight fitting respirators must be clean shaven on those areas of the face where the respirator seal contacts the face. Use pressure-demand airline respirators when performing jobs with high potential exposures such as changing filters in a baghouse air cleaning device.

Thermal hazards Not applicable.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Appearance	
Physical state	Solid.
Form	Various shapes.
Color	Copper.
Odor	Not applicable.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	1981.4 °F (1083 °C) estimated
Initial boiling point and boiling range	4703 °F (2595 °C) estimated

Flash point Not applicable.



Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	0.91 hPa estimated
Vapor density	Not applicable.
Relative density	Not applicable.
Solubility(ies)	
Solubility (water)	Not applicable.
Partition coefficient (n-octano/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Density	8.66 g/cm ³ estimated
Flammability	Not applicable.
Specific gravity	8.66 estimated

Section 10: Stability and Reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	None under normal conditions. Heat, flames and sparks.
Incompatible materials ⁰	Do not mix with other chemicals. None known.
Hazardous decomposition products	No hazardous decomposition products are known.

Section 11: Toxicological Information

Information on likely routes of exposure

Inhalation	May cause sensitization by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs (respiratory system) through prolonged or repeated exposure.
Skin contact	May cause allergic skin reaction.
Eye contact	Not likely, due to the form of the product.
Skin contact	Not likely, due to the form of the product.

Symptoms related to the physical, chemical and toxicological characteristics	Respiratory disorder.
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Information on toxicological effects

Acute toxicity	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.
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Skin corrosion/irritation	Not likely, due to the form of the product.
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Serious eye damage/eye irritation Harmful in contact with eyes.

Respiratory or skin sensitization

ACGIH Sensitization

Beryllium (CAS 7440-41-7)

Respiratory sensitization

Respiratory sensitization

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

Skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

Due to lack of data the classification is not possible

Carcinogenicity

Cancer hazard.

IARC Monographs. Overall Evaluation of Carcinogenicity

Beryllium (CAS 7440-41-7)

1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Beryllium (CAS 7440-41-7)

Known To Be Human Carcinogen.

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

Not Listed.

Reproductive toxicity

Not classified

Specific target organ toxicity single exposure

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

Specific target organ toxicity repeated exposure

May cause damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

Aspiration hazard

Due to lack of data the classification is not possible.

Chronic effects

Hazardous by OSHA criteria. May cause damage to organs through prolonged or repeated exposure.

Further information

Symptoms may be delayed.

Section 12: Ecological Information

Ecotoxicity

No ecotoxicity data noted for the ingredient(s).

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Not available.

Mobility in soil

Not available.

Other adverse effects

Not available.

Section 13: Disposal Considerations

Disposal instructions

Material should be recycled if possible. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

Hazards waste code

Not regulated.

Waste from residues/unused products

Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14: Transport Information

DOT

Not regulated as a dangerous goods.

IATA

Not regulated as a dangerous goods.

IMDG

Not regulated as a dangerous goods.

Section 15: Regulatory Information



US federal regulations

All components are on the U.S. EPA TSCA Inventory List.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Beryllium (CAS 7440-41-7) Listed.

Copper (CAS 7440-50-8) Listed.

US. OSHA Specifically Regulated Substance List (29 CFR 1910.1001-1050)

Not Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazards categories

Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not Listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Copper	7440-50-8	95.75 - 97.40
Beryllium	7440-41-7	.45 - 2.15

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Beryllium (CAS 7440-41-7)

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

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

US - New Jersey RTK - Substances: Listed substance

Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

US - Pennsylvania RTK - Hazardous Substances: All compounds of this substance are considered environmental hazards

Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Beryllium (CAS 7440-41-7)

US California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not Listed.

US California Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

US. Massachusetts RTK - Substance List

Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

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

Semco Beryllium Copper Plunger Tips SDS Updated 03-25-16



Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

US. Pennsylvania RTK - Hazardous Substances

Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

US. Pennsylvania Worker and Community Right-to-Know Law

Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

US. Rhode Island RTK

Beryllium (CAS 7440-41-7)

Copper (CAS 7440-50-8)

US. California Proposition 65

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Beryllium (CAS 7440-41-7)

Listed: October 1, 1987

Section 16: Other Information, including date of preparation or last revision

Issue date 03-25-2016

Version # 01

Further information Transportation Emergency
Call Chemtrec at:
Domestic: 800-424-9300
International: 703-527-3887

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Following is the label which accompanies this product during shipment.

BERYLLIUM COPPER ALLOY PLUNGER TIPS

**DRY GRINDING, WELDING OR MELTING MAY
RELEASE DUST OR FUMES WHICH COULD BE
HARMFUL IF INHALED AND POSSIBLY
IRRITATE EYES, SKIN OR MUCOUS MEMBRANES.**

**CONSULT S.D.S. FOR DETAILS
SEMCO, INC.**

**1025 POLE LANE ROAD-MARION, OHIO 43302
(740) 387-2229**

IMPORTANT: If you have any questions or require additional information regarding the materials described in this Safety Data Sheet, please telephone or write to the Plant Manager at the location given on page 1. Additional product safety information, is available from the plant manager or at www.semcotips.com.