



SAFETY DATA SHEET

This Safety Data Sheet complies with Annex II of 830/2015 amending EC No. 1907/2006, CLP directive 1272/2008, also in accordance with ISO 11014-1 and ANSI Z400.1

All-State Silflo 0

Issued: 2018-01-14

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name All-State Silflo 0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use Phos-Copper Brazing Alloys

1.3. Details of the supplier of the safety data sheet

SDS created by TDS Team

Supplier ESAB Group Canada, Inc.

Street address 6010 Tomken Road
ON L5T 1X9 Mississauga
Canada

Telephone (905) 670-0220 / 1-877-935-3226

Web site www.esab.ca

1.4. Emergency telephone number

Emergency phone number 1-800-424-9300 (Chemtrec)

Available outside office hours Yes

Other

AWS Classification: None

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The product is not classified according to Regulation (EC) No 1272/2008

2.2. Label elements

The product does not require labelling according to Regulation (EC) No 1272/2008



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2.3. Other hazards

Emergency Overview: Metal rods in varying color.

This product is normally not considered hazardous as shipped. Gloves should be worn when handling tp prevent cuts and abrasions. Persons with a pacemaker should not go near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device.

When this product is used in a brazing process, the most important hazards are heat, radiation, electric shock and brazing fumes.

Heat: Spatter and melting metal can cause burn injuries and start fires.

Radiation: Arc rays can severely damage eyes or skin.

Electricity: Electric shock can kill.

Fumes: Overexposure to brazing fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat, and eyes. Chronic overexposure to brazing fumes may affect pulmonary function. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait

Some individuals may develop a blue-grey skin pigmentation from exposure to silver (argyria).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS No. EC No.	Concentration	Classification	R-phrase H-phrase
Copper	7440-50-8 231-159-6	92 - 94%	- -	- -
Red Phosphorus	7723-14-0 231-768-7	6 - 8%	- Aquatic Chronic 3, Flam. Sol. 1	- H228, H412
Silver	7440-22-4 213-131-3	<2%	- -	- -

SECTION 4: First aid measures

4.1. Description of first aid measures

Electric shock: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires. If not breathing, begin artificial respiration, preferably mouth-to-mouth. If no detectable pulse, begin CPR Call a physician immediately.

Inhalation	If breathing has stopped, perform artificial respiration and obtain medical assistance immediately! If breathing is difficult, provide fresh air and call physician.
Skin contact	For skin burns from arc radiation, promptly flush with cold water. Get medical attention for burns or irritations that persist. To remove dust or particles wash with mild soap and water.
Eye contact	For radiation burns due to arc flash, see physician. To remove dusts or fumes flush with water for at least fifteen minutes. If irritation persists, obtain medical assistance.

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

Not applicable

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

Not applicable

Other



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

No specific recommendations for brazing consumables. Brazing sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation. Wear self-contained breathing apparatus as fumes or vapors may be harmful.

5.2. Special hazards arising from the substance or mixture

Not applicable

5.3. Advice for firefighters

Not applicable

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas.

Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

Use respirator or air supplied respirator when brazing in a confined space, or where local exhaust or ventilation is not sufficient to keep exposure values within safe limits. Use special care when brazing painted or coated steels since hazardous substances from the coating may be emitted.

Wear hand, head, eyes, ear and body protection like welders gloves, helmet or face shield with filter lens, safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry.

6.2. Environmental precautions

Refer to Section 13.

6.3. Methods and material for containment and cleaning up

Not applicable

6.4. Reference to other sections

Not applicable

Other

Solid objects may be picked up and placed into a container. Liquids or pastes should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

Handle with care to avoid stings and cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

7.2. Conditions for safe storage, including any incompatibilities

Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions. Store in cool/well-ventilated place.



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7.3. Specific end use(s)

Phos-Copper Brazing Alloys

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits

Use industrial hygiene monitoring equipment to ensure that exposure does not exceed applicable national exposure limits. The following limits can be used as guidance. Unless noted, all values are for 8 hour time weighted averages (TWA). When used with brazing and welding products, refer to the brazing or welding product SDS, Section 10, for information on brazing and welding fumes. Blue (No. 1 Flux), red (No. 5 Flux) or white (Brazo Flux) powder with no odor.

National occupational exposure limits

Ingredient	CAS no. EC No.	Exposure limit mg/m3-ppm	Short-term exposure limit mg/m3-ppm			Remark	Source	Year
Copper	7440-50-8 231-159-6	0,1	-	-	-	as Cu(fume)	OSHA	2017
Copper	7440-50-8 231-159-6	1	-	-	-	as Cu(dust,mist)	OSHA	2017
Red Phosphorus	7723-14-0 231-768-7	-	-	-	-	No PEL	OSHA	2017
Silver	7440-22-4 213-131-3	0,01	-	-	-	as Ag	OSHA	2017

8.2. Exposure controls

Technical precaution measures

Ensure sufficient ventilation, local exhaust, or both. Keep working place and protective clothing clean and dry. Check condition of protective clothing and equipment on a regular basis. Train welders to avoid contact with live electrical parts and insulate conductive parts.

Other

Avoid exposure to brazing and welding fumes, radiation, spatter, electric shock, heated materials and dust.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance Not applicable

b) Odour Not applicable

c) Odour treshold Not applicable

d) pH value Not applicable

e) Melting point / freezing point Not applicable

f) Initial boiling point and boiling range Not applicable

g) Flash point Not applicable



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h) Evaporation rate	Not applicable
i) Flammability (solid, gas)	Not applicable
j) Upper / lower flammability or explosive limits	Not applicable
k) Vapour pressure	Not applicable
l) Vapour density	Not applicable
m) Relative density	Not applicable
n) Solubility	Not applicable
o) Partition coefficient: n-octanol / water	Not applicable
p) Auto-ignition temperature	Not applicable
q) Decomposition temperature	Not applicable
r) Viscosity	Not applicable
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable
Appearance	Metallic rod
Melting point	637-710°C/1178-1310°F
Specific Gravity	7.4-8.54 (H ₂ O = 1)

9.2. Other information

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Contact with chemical substances like acids or strong bases could cause generation of gas.
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10.2. Chemical stability

Chemical stability	This product is stable under normal conditions.
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10.3. Possibility of hazardous reactions

Not applicable

10.4. Conditions to avoid

Not applicable

10.5. Incompatible materials

Not applicable



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10.6. Hazardous decomposition products

Not applicable

Other

This products is only intended for normal brazing and welding purposes

When these products are used in a brazing and welding process, hazardous decomposition products would include those from the volatilization, reaction or oxidation of the materials listed in Section 3 and those from the brazing and welding consumables, the base metal and coating. Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in Section 8. Manganese and nickel also have low exposure limits, in some countries, that may be easily exceeded.

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 quantity of fumes and gases produced.

Fumes from these products may contain compounds of the following chemical elements: Ag, Cu, P. The rest is not analyzed, according to available standards.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on toxicological effects

Inhalation of soldering fumes and gases can be dangerous to your health. Classification of soldering fumes is difficult because of varying base materials, coatings, air contamination and processes. The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans (Group 2B).

Acute toxicity

Overexposure to soldering fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes.

Skin corrosion/irritation

No data available

Serious eye damage/irritation

No data available

Respiratory/skin sensitization

No data available

Germ cell mutagenicity

No data available

Genotoxicity

No data available

Carcinogenicity

No data available

Repeated dose toxicity

No data available

Reproductive toxicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration hazard

No data available

LD50 Oral

No data available

LD50 Dermal

No data available

LC50 Inhalation

No data available



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Other

Long term effect

Overexposure to soldering fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Overexposure to soldering fumes may affect pulmonary function. Some individuals may develop a blue-grey pigmentation from exposure to silver (argyria).

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

No data available

Toxicity

No data available

Aquatic

No data available

Soil

No data available

Acute fish toxicity

No data available

Acute algae toxicity

No data available

Acute crustacean toxicity

No data available

Chronical toxicity

This product contains Red Phosphorus which is classified as harmful to aquatic organisms by 1272/2008 CLP Directive and may cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability

No data available

Decay/transformation

No data available

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available

12.4. Mobility in soil

Mobility

No data available

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

Not applicable

Other

Brazing consumables and materials could degrade/weather into components originating from the consumables or from the materials used in the brazing process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater. May be toxic to aquatic species and is regulated as an environmental hazard in the European Union. This hazard is not anticipated from the handling of brazing consumables but is relevant if consumables enter natural waterways.



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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations

Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal and local regulations. Use recycling procedures if available. USA RCRA: Unused product or product residue containing silver is considered hazardous waste if discarded, RCRA ID characteristic Toxic Hazardous Waste D011.

Residues from brazing consumables and processes could degrade and accumulate in soils and groundwater.

SECTION 14: Transport information

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

Other

U.S. Department of Transportation Ground (49CFR): Not dangerous goods
International Air Transportation (ICAO/IATA): Not dangerous goods
International Maritime Organization (IMO/IMDG): Not dangerous goods



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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL. of 19 November 2008. on waste and repealing certain Directives.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.



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Other regulations, limitations and legal regulations

Poland Regulations:

ACT of 25 February 2011 on the chemical substances and their mixtures(OJ # 63, poz. 322).

Regulation of the Minister of Labour and Social Policy of 6 June 2014 on Maximum Permissible Concentration and Intensity of Agents Harmful to Health in the Working Environment (Dz. u. z. 2014, poz 817).

The Act on Waste of 14 December 2012, Journal of Laws of 2013, item 21 with amendments

Act of 13th June 2013 on packaging management and packaging waste (Journal of Laws of 2013, item 888).

Regulation of the Minister of the Environment of 9 December 2014 on waste catalogue (Journal of Laws of 2014, item 1923).

Regulation of the Minister of Economy of 21 December 2005. Concerning essential requirements for personal protective equipment (Journal. Laws No. 259, item. 2173).

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to health in the working environment (the Journal of Laws 2011, no. 33, item 166).

USA Regulations :

USA: 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.)

CERCLA/SARA Title III Reportable Quantities (RQs) and/or Threshold Planning Quantities (TPQs): Product is a solid solution in the form of a solid article. Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to your Local Emergency Planning Committee.

EPCRA/SARA Title III 313 Toxic Chemicals: The following metallic components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA 313 reporting. See Section 3 for weight percent.

Silver: 1.0% de minimis concentration

Copper: 1.0% de minimis concentration

International Inventories:

Australia: The substance(s) in this product is/are in compliance with the inventory requirements of Australian Inventory of Chemical Substances (AICS)

United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.

Canadian Environmental Protection Act (CEPA): All constituent(s) of this product is/are on the Domestic Substance List (DSL).

15.2. Chemical safety assessment

Chemical safety assessment

No data available

Other

Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.

WARNING: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation.

ELECTRIC SHOCK can kill. ARC RAYS and SPARKS can injure eyes and burn skin.

Wear correct hand, head, eye and body protection.



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SECTION 16: Other information

Changes to previous revision	This Safety Data Sheet has been revised due to modifications to Sections 1-16. This SDS supersedes... 1027/05
References to key literature and data sources	Refer to ESAB "Welding and Cutting - Risks and Measures", F52-529 "Precautions and Safe Practices for Electric Welding and Cutting" and F2035 "Precautions and Safe Practices for Gas Welding, Cutting and Heating" available from ESAB, and to: www.esab.com
Phrase meaning	Aquatic Chronic 3 - Hazardous to the aquatic environment — Chronic hazard category 3 Flam. Sol. 1 - Flammable solids, hazard category 1 H228 - Flammable solid. H412 - Harmful to aquatic life with long lasting effects.

Other

Additional information	<p>USA: Contact ESAB at www.esabna.com or 1-800 ESAB-123 if you have any questions about this SDS. American National Standard Z49.1 Safety in Welding and Cutting, ANSI/AWS F1.5 Methods for Sampling and Analyzing Gases from Welding and Allied Processes, ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes", AWSF3.2M/F3.2 "Ventilation Guide for Weld Fume", 550 North Le Jeune Road, Miami Florida 33135. Safety and Health Fact Sheets available from AWS at www.aws.org.</p> <p>OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954</p> <p>American Conference of Governmental Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices, 6500 Glenway Ave., Cincinnati, Ohio 45211, USA.</p> <p>NFPA 51B "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169</p> <p>UK: WMA Publication 236 and 237, "Hazards from Welding fume", "The arc welder at work, some general aspects of health and safety".</p> <p>Germany: Accident prevention regulation BGV D1, "Welding, cutting and related procedures"</p> <p>Canada: CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting, and Allied Processes".</p> <p>This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.</p> <p>ESAB requests the users of this product to study this Safety Data Sheet (SDS) and become aware of product hazards and safety information. To promote safe use of this product a user should: notify its employees, agents and contractors of the information on this SDS and any product hazards/safety information.furnish this same information to each of its customers for the products</p> <p>Request such customers to notify employees and customers for the same product hazards and safety information.</p> <p>The information herein is given in good faith and based on technical data that ESAB believes to be reliable. Since the conditions of use is outside our control, we assume no liability in connection with any use of this information and no warranty expressed or implied is given. Contact ESAB for more information.</p>
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