



**SAFETY DATA SHEET**  
 This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

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

#### 1.1. Product identifier

Trade name All-State AquaSafe 100

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

Use Wire or paste used for soldering copper and copper based alloys

#### 1.3. Details of the supplier of the safety data sheet

SDS created by TDST

Supplier THE ESAB GROUP, INC

Street address 801 Wilson Avenue  
 PA 17331 Hanover  
 USA

Telephone 1-717-637-8911, 1-800-933-7070

Web site www.esabna.com

#### 1.4. Emergency telephone number

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

Available outside office hours No

#### Other

Classification(s): NA

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

The product is not classified

#### 2.2. Label elements

The product does not require labelling

#### 2.3. Other hazards

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.

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 soldering fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Chronic overexposure to soldering fumes may affect pulmonary function. Prolonged inhalation of nickel and chromium compounds above safe exposure limits can cause cancer. Overexposure to manganese and manganese compounds above

**SAFETY DATA SHEET**

This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

**All-State AquaSafe 100**

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).

Flame Processing: When used with combustible gas equipment (e.g., oxy-acetylene torch), read the use and safety information for that equipment.

*Other*

Emergency Overview: Silver-white metal wire or metallic grey paste. Paste is acidic and can burn skin and eyes. While wire is normally not considered hazardous as shipped, the paste can cause burns to the skin and eyes and may be harmful or fatal if swallowed. Gloves should be worn when handling to prevent cuts and abrasions. Gloves should be worn when handling to prevent contaminating hands with product dust.

**SECTION 3: Composition/information on ingredients***3.2. Mixtures*

<b>Chemical name</b>	<b>CAS No. EC No. REACH No.</b>	<b>Concentration</b>	<b>Classification</b>	<b>R-phrase H-phrase</b>
Tin	7440-31-5 231-141-8 -	90 - 95%	- -	- -
Copper	7440-50-8 231-159-6 01-2119480154 - 42	1 - 5%	- -	- -
Antimony	7440-36-0 231-146-5 -	1 - 2%	- -	- -
Silver	7440-22-4 213-131-3 -	1 - 2%	- -	- -

**SECTION 4: First aid measures***4.1. Description of first aid measures*

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.
Ingestion	If paste product is swallowed, call a physician or poison control center immediately. Do not induce vomiting unless directed to do so by a physician.



This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

### 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

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.  
General: Move to fresh air and call for medical aid.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Not applicable

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

Product (paste) involved in a fire may emit irritating and toxic fumes. Silver-white metal wire or metallic grey paste.

### 5.3. Advice for firefighters

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus as fumes or vapors may be harmful.

#### Other

No specific recommendations for welding consumables. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Not applicable

### 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



This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

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.

### 7.3. Specific end use(s)

Not applicable

## 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). For information about welding fume analysis refer to Section 10.

#### National occupational exposure limits

<i>Ingredient</i>	<i>CAS no.</i>	<i>EC No.</i>	<i>Exposure limit mg/m<sup>3</sup>-ppm</i>	<i>Short-term exposure limit mg/m<sup>3</sup>-ppm</i>	<i>Remark</i>	<i>Source</i>	<i>Year</i>
Copper	7440-50-8	231-15-9-6	0,1	-	- as CU fume	OSHA	2016
Copper	7440-50-8	231-15-9-6	1	-	- as Cu(dust, mist)	OSHA	2016
Tin	7440-31-5	231-14-1-8	2	-	- as Sn	OSHA	2016
Silver	7440-22-4	213-13-1-3	0,01	-	- as Ag	OSHA	2016
Antimony	7440-36-0	231-14-6-5	0,5	-	- as Sb	OSHA	2016

### 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. Keep working place and protective clothing clean and dry. Train welders to avoid contact with live electrical parts and insulate conductive parts.

**SAFETY DATA SHEET**

This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

**All-State AquaSafe 100***Other*

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

## Personal protective equipment

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.

**SECTION 9: Physical and chemical properties***9.1. Information on basic physical and chemical properties*

Appearance	Silver-white metal wire or metallic grey paste.
Appearance, colour	Not applicable
Appearance, physical state	Not applicable
Auto-ignition temperature	Not applicable
Boiling point	2200-2250°C/3992-4082°F for wire. Not determined for paste.
Decomposition temperature	Not applicable
Evaporation rate	Not applicable
Explosive properties	Not applicable
Flammability (solid, gas)	Not applicable
Flash point	The product is not flammable.
Initial boiling point and boiling range	Not applicable
Melting point	221°C/430°F for wire. Not determined for paste.
Melting point / freezing point	Not applicable
Odour	Not applicable
Odour threshold	Not applicable
Oxidising properties	Not applicable
Partition coefficient: n-octanol / water	Not applicable
pH value	Not applicable
Relative density	Not applicable
Solubility	Not applicable
Solubility in water	None for wire. Paste is partially soluble.



This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

Specific Gravity	7.1 for wire. Paste is less, but not measured.
------------------	--

Upper / lower flammability or explosive limits	Not applicable
--	----------------

Vapour density	Not applicable
----------------	----------------

Vapour pressure	Not applicable
-----------------	----------------

Viscosity	Not applicable
-----------	----------------

### 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.
------------	--

### 10.2. Chemical stability

Chemical stability	This product is stable under normal conditions.
--------------------	---

### 10.3. Possibility of hazardous reactions

Not applicable

### 10.4. Conditions to avoid

Not applicable

### 10.5. Incompatible materials

Not applicable

### 10.6. Hazardous decomposition products

Not applicable

### Other

When this product is used in a 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 base metal and coating.

Fumes from this product may contain compounds of the following chemical elements: Ag, Cu, Sb, Sn, No<sub>2</sub> The rest is not analyzed, according to available standards.

Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in Section 8.

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.

## SECTION 11: Toxicological information



This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

### 11.1. Information on toxicological effects

Information on toxicological effects	Inhalation of brazing and welding fumes and gases can be dangerous to your health. Classification of brazing and welding 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	Not applicable
serious eye damage/irritation	Not applicable
Respiratory/skin sensitization	Not applicable
germ cell mutagenicity	Not applicable
Genotoxicity	Not applicable
carcinogenicity	Not applicable
reproductive toxicity	Not applicable
STOT-single exposure	Not applicable
STOT-repeated exposure	Not applicable
Aspiration hazard	Not applicable

### Other

Long term effect	Overexposure to welding fumes may affect pulmonary function. Prolonged inhalation of nickel and chromium compounds above safe exposure limits can cause cancer. 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). Antimony trioxide is an animal carcinogen, but there is no indication that antimony metal is carcinogenic.
------------------	---

## SECTION 12: Ecological information

### 12.1. Toxicity

Toxicity	Welding consumables and materials could degrade/weather into components originating from the consumables or from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater.
----------	---

### 12.2. Persistence and degradability

Not applicable

### 12.3. Bioaccumulative potential

Not applicable



This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

### 12.4. Mobility in soil

Not applicable

### 12.5. Results of PBT and vPvB assessment

Not applicable

### 12.6. Other adverse effects

Not applicable

## 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: This product is not considered hazardous waste if discarded. Residues from brazing and welding consumables and processes could degrade and accumulate in soils and groundwater.

## SECTION 14: Transport information

### 14.1. UN number

UN number UN1760

### 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

## SECTION 15: Regulatory information





This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

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

#### Other regulations, limitations and legal regulations

Canada: WHMIS classification: Class D; Division 2, Subdivision A (wire) Class E (Paste)  
 Canadian Environmental Protection Act (CEPA): All constituents of this product are on the Domestic Substance List (DSL).  
 USA: Under the OSHA Hazard Communication Standard, this product is considered hazardous.  
 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.)  
 United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.  
 CERCLA/SARA Title III  
 Reportable Quantities (RQs) and/or Threshold Planning Quantities (TPQs): .  
 Ingredient name / RQ (lb) / TPQ (lb)  
 Antimony (only for particles with a diameter <0.004") /5000/---  
 Copper (only for particles with a diameter <0.004") /5000/---  
 Silver (only for particles with a diameter <0.004") /1000/---  
  
 - 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.  
 Section 311 Hazard Class  
 ; As shipped: Immediate  
 In Use: Immediate delayed  
 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.  
 Ingredient name/ Disclosure threshold  
 Copper / 1.0% de minimis concentration  
 Antimony/1.0% de minimis concentration  
 Silver/1.0% de minimis concentration

### 15.2. Chemical safety assessment

Chemical safety assessment No

#### 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.

## SECTION 16: Other information

#### Changes to previous revision

This Safety Data Sheet has been revised due to modification(s) to section(s) 1-16

#### 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](http://www.esab.com)

#### Other



This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

## All-State AquaSafe 100

### Additional information

USA: Contact ESAB at [www.esabna.com](http://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", 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", American Welding Society, 550 North Le Jeune Road, Miami Florida 33135. Safety and Health Fact Sheets available from AWS at [www.aws.org](http://www.aws.org).

OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954

American Conference of Governmental Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices, 6500 Glenway Ave., Cincinnati, Ohio 45211, USA. American Conference of Governmental Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices, 6500 Glenway Ave., Cincinnati, Ohio 45211, USA.

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.

UK: WMA Publication 236 and 237, "Hazards from Welding Fume", "The arc welder at work, some general aspects of health and safety".

Germany: Accident prevention regulation BGV D1, "Welding, cutting and related procedures".

Canada: CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting, and Allied Processes". This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

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 product.

request such customers to notify employees and customers for the same product hazards and safety information.

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.