



## All-State No.55 Rubbon (USA)

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

#### 1.1. Product identifier

Trade name All-State No.55 Rubbon (USA)

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

Use Solder for aluminum base metals

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

Supplier ESAB DENTON

Street address 2800 Airport Road  
Denton, TX 76207

Telephone 1-800-372-2123

Email sds.esab@esab.se

Web site www.esab.com

#### 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

Description This product is not classified as hazardous according to applicable GHS hazard classification criteria as required and defined in OSHA Hazard Communication Standard (29CFR Part 1910.1200).

#### 2.2. Label elements

More information This product does not require labeling.

#### 2.3. Other hazards

Skin contact is normally no hazard but should be avoided to prevent possible allergic reactions.

Persons with a pacemaker should not go near soldering operations until they have consulted their doctor and obtained information from the manufacturer of the device.

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

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**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 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.

**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.

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

*Other*

Silver, bluish-white metallic rods. Odorless. This product is normally not considered hazardous as shipped. Gloves should be worn when handling to prevent cuts and abrasions.

**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>
Zinc	7440-66-6 - -	93 - 95%	- -	- -
Aluminum	7429-90-5 231-072-3 -	3 - 5%	- -	- -
Copper	7440-50-8 231-159-6 01-2119480154 - 42	<2%	- -	- -

Product based on This product is a solid metal rod.

**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 Cardio Pulmonary Resuscitation (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. Obtain medical assistance for irritation or any other symptom.

**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.

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**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

## SECTION 5: Firefighting measures

*5.1. Extinguishing media*

**Suitable extinguishing media** No specific recommendations for soldering consumables. The soldering process can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation.

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

Flame will trace fine zinc dust. Product of combustion is ZnO.  
Finely divided dust may form explosive mixture with air.

*5.3. Advice for firefighters*

**Special protective equipment for fire-fighters** Wear self-contained breathing apparatus as fumes or vapors may be harmful.

*Other*

Do not use water on molten metal. Never drop water or liquids into molten solder.  
Do not plunge damp or wet solder bars/pieces into molten solder.

## SECTION 6: Accidental release measures

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

Refer to Section 8.

*6.2. Environmental precautions*

Refer to Section 13.

*6.3. Methods and material for containment and cleaning up*

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.

*6.4. Reference to other sections*

Refer to Section 8 and Section 13.

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**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 soldering consumables. Avoid exposure to dust. Do not ingest. Do not breathe vapors produced by use of this product. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

General hygiene

Good housekeeping procedures should be maintained. Personnel should wash thoroughly before smoking or eating. Food and drink should not be consumed, tobacco products used, or cosmetics applied in areas where exposures exist.

7.2. Conditions for safe storage, including any incompatibilities

Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

7.3. Specific end use(s)

Soldering

Other

Wet or moist ingot(s) will present an explosion hazard when submerged in molten solder. AVOID FIRE/EXPLOSION RISKS. Always preheat ingot before charging into furnace.

**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.

ACGIH TLV, mg/m3

Aluminum oxide (as Al) 1 Respirable fraction  
Copper (fume, as Cu) 0.2  
Zinc (metal) None

USA, OSHA PEL, mg/m3

National occupational exposure limits

Ingredient	CAS no.	EC No.	Exposure limit mg/m3-ppm	Short-term exposure limit mg/m3-ppm	Remark	Source	Year
Aluminum, metal and insoluble compounds	7429-90-5	-	5	-	- Respirable fraction	-	2017
Aluminum, metal and	7429-90-5	-	15	-	- Total dust	-	2017

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insoluble compounds									
Copper	7440-5 0-8	-	0,1	-	-	-	Fume, as Cu	-	2017
Copper	7440-5 0-8	-	1	-	-	-	Dust and mists, as Cu	-	2017
Zinc, metal	7440-6 6-6	-	-	-	-	-	No PEL	-	2017

**8.2. Exposure controls**

Not applicable

**Other**

Avoid exposure to soldering fumes, radiation, spatter, electric shock, heated materials and dust. Train welders to avoid contact with live electrical parts and insulate conductive parts.

**Ventilation**

Use respirator or air supplied respirator when soldering in a confined space, or where local ventilation is not sufficient to keep exposure values within safe limits. Use special care when soldering painted or coated steels since hazardous substances from the coating may be emitted. Ensure sufficient ventilation, local exhaust, or both, to keep soldering fumes and gases from the breathing zone and general area.

**Personal protective equipment**

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	Metal rods
Appearance, colour	Silver, bluish-white
Appearance, physical state	Solid
Auto-ignition temperature	Not applicable
Boiling point	1314°C/ 2400°F
Decomposition temperature	No data available
Evaporation rate	Not applicable
Explosive properties	Not applicable
Flammability (solid, gas)	Not applicable
Flash point	Not applicable
Initial boiling point and boiling range	No data available

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Melting point	387°C/ 728°F
Melting point / freezing point	Not applicable
Odour	Odorless
Odour threshold	Not applicable
Oxidising properties	Not applicable
Partition coefficient: n-octanol / water	Not applicable
pH value	Not applicable
Relative density	6.68 g/cm <sup>3</sup>
Solubility	No data available
Upper / lower flammability or explosive limits	Not applicable
Vapour density	Not applicable
Vapour pressure	Not applicable
Viscosity	Not applicable
Volatility	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.
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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*

Possibility of hazardous reactions	Not applicable
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*10.4. Conditions to avoid*

Conditions to avoid	This product is only intended for normal soldering purposes.
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*10.5. Incompatible materials*

Incompatible materials	Not applicable
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**All-State No.55 Rubbon (USA)****10.6. Hazardous decomposition products****Hazardous decomposition products**

When this product is used in a soldering 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: Al, Cu, Zn, and nitrogen oxide. The rest is not analyzed, according to available standards.

**Other**

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

A significant amount of the chromium in the fumes can be hexavalent chromium, which has a very low exposure limit in some countries. Manganese and nickel 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 soldering area can be affected by the soldering process and influence the composition and quantity of fumes and gases produced.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

Information on toxicological effects	Inhalation of soldering fumes 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	Not applicable
serious eye damage/irritation	Not applicable
Respiratory/skin sensitization	Not applicable
germ cell mutagenicity	Not applicable
Genotoxicity	Not applicable
carcinogenicity	Not applicable
Repeated dose toxicity	Not applicable
reproductive toxicity	Not applicable
STOT-single exposure	Not applicable
STOT-repeated exposure	Not applicable
Aspiration hazard	Not applicable

**Other**

Zinc: Excessive inhalation of zinc oxide fumes may produce symptoms known as "zinc shakes" which are flu-like and usually cease when the individual is removed from the source.

Copper: Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms



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consist of chills and fever which come on a few hours after a large exposure. Long-term effects of metal fume fever have not been noted. Physiological effects: Industrial exposure to copper fumes, dusts, or mists results in metal fume fever with atrophic changes in nasal mucous membranes. Chronic poisoning results in Wilson's disease, characterized by a hepatic cirrhosis, brain damage, demyelination, renal disease, and copper deposition in the cornea.

Aluminum: Inhalation of finely divided powder has been reported as a cause of pulmonary fibrosis. May be implicated in Alzheimer's disease.

### Long term effect

Chronic toxicity: 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 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.

## SECTION 12: Ecological information

### 12.1. Toxicity

Not applicable

### 12.2. Persistence and degradability

Not applicable

### 12.3. Bioaccumulative potential

Not applicable

### 12.4. Mobility in soil

Not applicable

### 12.5. Results of PBT and vPvB assessment

Not applicable

### 12.6. Other adverse effects

Not applicable

### Other

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

## 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 soldering consumables and processes could degrade and accumulate in soils and groundwater.



**All-State No.55 Rubbon (USA)****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

**SECTION 15: Regulatory information**

## 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  
 Canadian Environmental Protection Act (CEPA): All constituents of this product are on the Domestic Substance List (DSL).

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): 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.

Section 311 Hazard Class As shipped: Immediate In use: Immediate delayed

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.

Aluminum (fume or dust): 1.0% de minimis concentration

Copper: 1.0% de minimis concentration



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

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Zinc (fume or dust): 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 soldering and protect yourself and others.

**WARNING:** Soldering 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 modifications to Sections 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:

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", 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.

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: Unfallverhütungsvorschrift BGV D1, "Schweißen, Schneiden und verwandte Verfahren".

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.

#### Other

## SAFETY DATA SHEET

Replaces SDS: 2014-05-01

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

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#### Additional information

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.

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