

# SAFETY DATA SHEET

This Safety Data Sheet complies with Annex II of 830/2015 amending EC No. 1907/2006, Commission Regulation (EU) 2019/521 amending CLP directive 1272/2008, also in accordance with ISO 11014-1 and ANSI Z400.1

Issued: 2021-01-11



## All-State No. 24 AC/DC

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

#### 1.1. Product identifier

**Trade name** All-State No. 24 AC/DC

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

**Use** Arc Welding

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

**SDS created by** TDS Team

**Supplier** ESAB AB

**Street address** Box 8004  
402 77 Göteborg  
Sweden

**Telephone** +46 31 509000

**Email** sdsrequest@esab.com

**Web site** www.esab.com

#### 1.4. Emergency telephone number

**Emergency phone number** +46 31 509000

**Available outside office hours** No

#### Other

**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 in accordance with CLP Regulation (EC) No 1272/2008.

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### 2.3. Other hazards

#### Other hazards

Avoid eye contact or inhalation of dust from the product. Skin contact is normally no hazard but should be avoided to prevent possible allergic reactions.

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 welding process, the most important hazards are welding fumes, heat, radiation and electric shock.

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

Radiation: Arc rays can severely damage eyes or skin.

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

Fumes: Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Chronic overexposure to welding 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. psychological disturbances and spastic gait

#### Other

#### Other

Emergency Overview: Coated metal rods in varying colours. This product is normally not considered hazardous as shipped. Gloves should be worn when handling to prevent contaminating hands with product dust.

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### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-pharse M factor acute M factor chronic	Note
COPPER	7440-50-8 231-159-6 - -	75 - 85%	-	- - -	-
BARIUM CARBONATE	513-77-9 208-167-3 - -	5 - 10%	-	- - -	-
Limestone	1317-65-3 215-279-6 - -	3 - 7%	-	- - -	-
Tin	7440-31-5 231-141-8 - -	3 - 7%	-	- - -	-
FLUORIDES	7789-75-5 232-188-7 - -	1 - 5%	-	- - -	-
IRON(REACH Registered)	7439-89-6 231-096-4 - -	1 - 5%	-	- - -	-
SILICATE BINDER (SODIUM SILICATE)	1344-09-8 215-687-4 - -	0 - 1.5%	-	- - -	-
Manganese	7439-96-5 231-105-1 - -	0 - 0.5%	-	- - -	-

**Product based on** This product is a preparation of core wire with extruded coating.

### 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.

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### 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

### 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

Not applicable

### 5.3. Advice for firefighters

### Special protective equipment for fire-fighters

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

### Other

### 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

### Environmental precautions

Refer to Section 13.

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

Not applicable

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### 6.4. Reference to other sections

Not applicable

### Other

#### 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

#### 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

Ingredient	CAS No. EC No.	Exposure limit ppm / mg/m <sup>3</sup>	Short-term exposure limit ppm / mg/m <sup>3</sup>	Ceiling exposure limit ppm / mg/m <sup>3</sup>	Source	Remark	Year
COPPER	7440-50-8 231-159-6	- 1	- -	- -	OSHA	as Cu (dust,mist)	2019
COPPER	7440-50-8 231-159-6	- 1	- -	- -	ACGIH	Dusts and mists (as Cu)	2019
BARIUM CARBONATE	513-77-9 208-167-3	- -	- -	- -	OSHA	-	2019
Limestone	1317-65-3 215-279-6	- 15	- -	- -	OSHA	Total dust	2019
COPPER	7440-50-8 231-159-6	- 0.1	- -	- -	OSHA	as Cu (Fume)	2019
COPPER	7440-50-8 231-159-6	- 0.2	- -	- -	ACGIH	Fume (as Cu)	2019
COPPER	7440-50-8	-	-	-	ACGIH	Cotton dust	2019

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Ingredient	CAS No. EC No.	Exposure limit ppm / mg/m <sup>3</sup>	Short-term exposure limit ppm / mg/m <sup>3</sup>	Ceiling exposure limit ppm / mg/m <sup>3</sup>	Source	Remark	Year
	231-159-6	0.1	-	-			
BARIUM CARBONATE	513-77-9 208-167-3	- -	- -	- -	ACGIH	-	2019
Limestone	1317-65-3 215-279-6	- 5	- -	- -	OSHA	Respirable Fraction	2019
Tin	7440-31-5 231-141-8	- 2	- -	- -	OSHA	Inorganic compounds except oxide, as Sn	2019
Tin	7440-31-5 231-141-8	- 2	- -	- -	ACGIH	metal, oxide and inorganic compounds, except tin hydride and indium tin oxide, as Sn	2019
FLUORIDES	7789-75-5 232-188-7	- -	- -	- -	OSHA	-	2019
Limestone	1317-65-3 215-279-6	- -	- -	- -	ACGIH	-	2019
Tin	7440-31-5 231-141-8	- 0.1	- -	- -	OSHA	Organic compounds, as Sn	2019
Tin	7440-31-5 231-141-8	- 0.1	- -	- -	ACGIH	organic compounds (as Sn)	2019
FLUORIDES	7789-75-5 232-188-7	- -	- -	- -	ACGIH	-	2019
IRON(REACh Registered)	7439-89-6 231-096-4	- -	- -	- -	OSHA	No PEL	2019
SILICATE BINDER (SODIUM SILICATE)	1344-09-8 215-687-4	- -	- -	- -	OSHA	No PEL	2019
Manganese	7439-96-5 231-105-1	- -	- -	- 5	OSHA	as Mn	2019
Manganese	7439-96-5 231-105-1	- 0.1	- -	- -	ACGIH	for elemental and inorganic compounds	2019
IRON(REACh Registered)	7439-89-6 231-096-4	- -	- -	- -	ACGIH	-	2019
SILICATE BINDER (SODIUM SILICATE)	1344-09-8 215-687-4	- -	- -	- -	ACGIH	-	2019
Manganese	7439-96-5 231-105-1	- 0.02	- -	- -	ACGIH	as Mn	2019

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### 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.

#### Safety gloves

Abrasion (Cycles):(Type A-2 (500));(Type B-1 (100)); Cut (Factor):(Type A-1 (1.2));(Type B-1 (1.2)); Tear (Newton):(Type A-2 (25));(Type B-1 (10)); Puncture (Newton):(Type A-2 (60));(Type B-1 (20)); Burning Behaviour:(Type A-3);(Type B-2); Contact Heat:(Type A-1);(Type B-1); Convective Heat:(Type A-2);(Type B--); Small Splashes:(Type A-3);(Type B-2); Dexterity:(Type A-1 (11));(Type B-4 (6.5)) Type B gloves are recommended when high dexterity is required as for TIG welding, while type A gloves are recommended for other welding processes. The contact temp (oC) is 100 and the threshold time (seconds) >15.

#### Other

#### 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, physical state

Solid, non-volatile with varying color.

#### Appearance, colour

Not applicable

#### Odour

Not applicable

#### Odour threshold

Not applicable

#### pH value

Not applicable

#### Melting point / freezing point

>1300°C/>2300°F

#### Initial boiling point and boiling range

Not applicable

#### Flash point

Not applicable

#### Evaporation rate

Not applicable

#### Flammability (solid, gas)

Not applicable

#### Upper / lower flammability or explosive limits

Not applicable

#### Vapour pressure

Not applicable

#### Vapour density

Not applicable

#### Relative density

Not applicable

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**Solubility** Not applicable

**Partition coefficient: n-octanol / water** Not applicable

**Ignition temperature** Not applicable

**Decomposition temperature** Not applicable

**Viscosity, kinematic** Not applicable

**Viscosity, dynamic** Not applicable

**Explosive properties** Not applicable

**Oxidising properties** Not applicable

### 9.2. Other information

Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** Non Reactive unless gets in 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



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### Other

#### 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 / Coated wire / Coated rod / Bare wire / Bare rod.

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 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.

## SECTION 11: Toxicological information

### 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 carcinogenic to humans (Group 1).

#### 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

#### Germ cell mutagenicity

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. 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. psychological disturbances and spastic gait

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### 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

#### 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. Welding slag from this product typically contains mainly the following components originating from the coating of the electrode. Fe, O, Mn, F, Si, Ca, Cu, Ba, Sn

### 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

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#### 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

#### 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.  
Copper:1.0% de minimis concentration

#### International Inventories:

Australia: The substance(s) in this product is/are in compliance with the inventory requirements of Australia- Inventory of Industrial Chemicals (AIIC)

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

Not Available

#### Other

#### 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.

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### All-State No. 24 AC/DC

## SECTION 16: Other information

### Changes to previous revision

This Safety Data Sheet has been revised due to modifications to Sections 1-16. Previous Revision of SDS as per Regulation – April 2019; Latest Revision of SDS as per Regulation – May 2020

### References to key literature and data sources

Refer to ESAB "Welding & Cutting - Risks and Measures", F52-529 "Precautions and Safe Practices for ARC WELDING, CUTTING & GOUGING" and F2035 "Precautions and Safe Practices for Gas Welding, Cutting and Heating" available from ESAB Website. [www.esab.com](http://www.esab.com)

### Other

### 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, 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](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: 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 of 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 products

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

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