

# 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: 2021-01-22



## REFRAC-T-BACK REFRACTORY BACKING TAPE

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

#### 1.1. Product identifier

**Trade name** REFRAC-T-BACK REFRACTORY BACKING TAPE

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

**Use** Ceramic Backing Material for Full Penetration 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): AWS A5.4

### 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

Not considered hazardous in normal handling but may release organic vapors when subjected to the extreme temperatures used in welding. 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 heat, radiation, electric shock and welding 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 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.

### Other

#### Other

Emergency Overview: White to tan ceramic blocks on adhesive coated aluminum ribbon. This product is normally not considered hazardous as shipped.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
Cordierite ceramic	66402-68-4 266-340-9 - -	80 - 100%	-	- - -	-
ALUMINUM	7429-90-5 231-072-3 - -	1 - 25%	-	- - -	-
Acrylic adhesive	9003-01-4 618-347-7 - -	0 - 5%	-	- - -	-

#### Product based on

This product is an article.

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Description of first aid measures</b>	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 emergency physician to the scene of the accident.
<b>Inhalation</b>	Article: Not a foreseeable route of entry.
<b>Skin contact</b>	Wash with mild soap and water.
<b>Eye contact</b>	Article: Not a foreseeable route of entry.
<b>Ingestion</b>	Article: Not a foreseeable route of entry.

#### 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

Not applicable

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

Not applicable

#### 5.3. Advice for firefighters

Not applicable

#### Other

<b>Other</b>	Use any standard agent.
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### SECTION 6: Accidental release measures

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

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

Pick up article and place into storage container.  
Use respirator or air supplied respirator when welding or 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 welding 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. Keep protective clothing clean and dry.

#### 6.2. Environmental precautions

##### Environmental precautions

Refer to Section 13.

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

##### 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

##### Reference to other sections

Refer to Section 8 and Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Preventive handling precautions

Avoid prolonged skin contact with adhesive surfaces.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Conditions for safe storage, including any incompatibilities

Store in dry place.

#### 7.3. Specific end use(s)

##### Specific end use(s)

Ceramic Backing Material for Full Penetration Welding

### 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).

National occupational exposure limits

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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>	Source	Remark	Year
Cordierite ceramic	66402-68-4 266-340-9	- -	- -	OSHA	-	2019
Aluminum	7429-90-5 231-072-3	- 5	- -	OSHA	Respirable fraction	2019
Cordierite ceramic	66402-68-4 266-340-9	- -	- -	ACGIH	-	2019
Acrylic Adhesive	9003-01-4 618-347-7	- -	- -	ACGIH	-	2019
Aluminum	7429-90-5 231-072-3	- 15	- -	OSHA	Total Dust	2019
Acrylic Adhesive	9003-01-4 618-347-7	- -	- -	OSHA	-	2019
Aluminum	7429-90-5 231-072-3	- 1	- -	ACGIH	Respirable Fraction	2019

### 8.2. Exposure controls

#### 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 welding 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 welding or 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 welding painted or coated steels since hazardous substances from the coating may be emitted. Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance, physical state

White to tan ceramic blocks on an adhesive coated aluminum ribbon.

#### Appearance, colour

Not applicable

#### Odour

Not applicable

#### Odour threshold

Not applicable

#### pH value

Not applicable

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### REFRAC-T-BACK REFRACTORY BACKING TAPE

<b>Melting point / freezing point</b>	Not applicable
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper / lower flammability or explosive limits</b>	No data available
<b>Vapour pressure</b>	Not applicable
<b>Vapour density</b>	Not applicable
<b>Relative density</b>	No data available
<b>Solubility</b>	Insoluble
<b>Partition coefficient: n-octanol / water</b>	Not applicable
<b>Ignition temperature</b>	Not applicable
<b>Decomposition temperature</b>	No data available
<b>Viscosity, kinematic</b>	Not applicable
<b>Viscosity, dynamic</b>	Not applicable
<b>Explosive properties</b>	Not applicable
<b>Oxidising properties</b>	Not applicable

#### 9.2. Other information

Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

<b>Reactivity</b>	Contact of aluminum ribbon with acids may release flammable hydrogen gas. Hazardous decomposition products of adhesive include carbon monoxide, carbon dioxide and organic compounds.
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### 10.2. Chemical stability

<b>Chemical stability</b>	Stable at normal conditions
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### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Not applicable
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### 10.4. Conditions to avoid

Not applicable

### 10.5. Incompatible materials

**Incompatible materials** Not applicable

### 10.6. Hazardous decomposition products

Not applicable

### Other

**Other** General: This product is intended for normal welding purposes.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Information on toxicological effects** Inhalation of welding fumes and gases can be dangerous to your health. Classification of 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 welding 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

<b>Long term effect</b>	Chronic toxicity: Overexposure to welding fumes may affect pulmonary function.
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### SECTION 12: Ecological information

#### 12.1. Toxicity

<b>Acute toxicity</b>	No data available
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<b>Toxicity</b>	No data available
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<b>Aquatic</b>	No data available
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<b>Soil</b>	No data available
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<b>Acute fish toxicity</b>	No data available
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<b>Acute algae toxicity</b>	No data available
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<b>Acute crustacean toxicity</b>	No data available
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<b>Chronical toxicity</b>	No data available
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#### 12.2. Persistence and degradability

<b>Persistence and degradability</b>	No data available
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<b>Decay/transformation</b>	No data available
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#### 12.3. Bioaccumulative potential

<b>Bioaccumulative potential</b>	No data available
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#### 12.4. Mobility in soil

<b>Mobility</b>	No data available
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#### 12.5. Results of PBT and vPvB assessment

<b>Results of PBT and vPvB assessment</b>	No data available
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#### 12.6. Other adverse effects

<b>Other adverse effects</b>	No data available
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Other

<b>Other</b>	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.
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<b>Biological decay</b>	No data available
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<b>Additional instructions</b>	No data available
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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: This product is not considered hazardous waste if discarded.  
(<https://rcrainfo.epa.gov/rcrainfoweb/action/modules/main/glossary/waste>)  
Residues from welding 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

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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.  
Aluminium: 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

No data available

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### 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.

Wear hand, eyes and body protection. Keep protective clothing clean and dry.

## 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 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)

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

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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