



SAFETY DATA SHEET

This Safety Data Sheet complies with European Commission Directive 91/155/EEC, ISO 11014-1 and ANSI Z400.1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: REFRAC-T-BACK REFRACTORY BACKING TAPE (includes the following stock numbers: 693000002, 693000010, 693000044, 693000051, 693000127, 693000133, 693000184, 693000192, 693000200, 693000218, 693000226, 693000234, 693000267, 693000283, 693000291)

Application: Ceramic Backing Material for Full Penetration Welding

Classification: AWS A5.4

Supplier: THE ESAB GROUP, INC., 801 Wilson Avenue, Hanover, PA 17331

Telephone No.: 1-717-637-8911, 1-800-933-7070

Emergency No.: 1-717-637-8911 and 1-800-424-9300 (CHEMTREC)

Web site: www.esabna.com

2. HAZARDS IDENTIFICATION

Emergency Overview: White to tan ceramic blocks on adhesive coated aluminum ribbon. These products are normally not considered hazardous as shipped.

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. 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is an article.

Ingredients	Weight %	CAS#	EINECS#	Hazard classification ⁽¹⁾	IARC ⁽²⁾	NTP ⁽³⁾	OSHA List ⁽⁴⁾
Acrylic adhesive	< 5	9003-01-4	Not found	No	--	--	--
Aluminum ribbon	1 – 25	7429-90-5	231-072-3	No (metal)	--	--	--
Cordierite ceramic	Balance	66402-68-4	266-340-9	No	--	--	--

⁽¹⁾ Hazard Classification according to European Council Directive 67/548/EEC, for R-phrases, see Section 16.

⁽²⁾ Evaluation according to the International Agency for Research on Cancer.

1 – Human Carcinogen 2B – Possibly carcinogenic to humans

⁽³⁾ Classification according to the 11th Report on Carcinogens, published by the US National Toxicology Program.

K – Known Carcinogen S – Suspect Carcinogen

⁽⁴⁾ Carcinogen listing according to OSHA, Occupational Safety & Health Administration (USA).

4. FIRST AID MEASURES

Inhalation: Article: Not a foreseeable route of entry.

Eye contact: Article: Not a foreseeable route of entry.

Skin contact: Normal hygiene. Wash with mild soap and water.

Ingestion: Article: Not a foreseeable route of entry.

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). Immediately call a physician.

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

5. FIRE FIGHTING MEASURES

Use any standard agent.

6. ACCIDENTAL RELEASE MEASURES

Pick up article and place into storage container.

Personal precautions: refer to Section 8

Environmental precautions: refer to Section 13

7. HANDLING AND STORAGE

Handling:

Avoid prolonged skin contact with adhesive surfaces.

Storage:

Keep containers closed and store in a cool, dry place.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

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

Engineering measures: (Welding operations)

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

Personal protective equipment: (Welding operations)

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.

Use industrial hygiene monitoring equipment to ensure that exposure does not exceed applicable national exposure limits. The following limits can be used as guidance. When used with welding products, refer to the welding product SDS for information on welding fumes.

Substance	CAS#	ACGIH TLV ⁽¹⁾ mg/m ³	OSHA PEL ⁽²⁾ mg/m ³
Acrylic adhesive	9003-01-4	None	None
Aluminum ribbon	7429-90-5	1**	15*, 5**
Cordierite ceramic	66402-68-4	None	None

⁽¹⁾ Threshold Limit Values according to American Conference of Governmental Hygienists, 2011

⁽²⁾ Permissible Exposure Limits according to the Occupational Safety & Health Administration (USA)

Unless noted, all values are for 8 hour time weighted averages (TWA).

* Total dust, ** Respirable fraction

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to tan ceramic blocks on an adhesive coated aluminum ribbon.
Specific Gravity:	> 2.5
Boiling Point:	Not determined.
Freezing Point:	Not determined.
Vapor Pressure:	Not applicable.
Vapor Density:	Not applicable.
Evaporation Rate:	Not applicable.
Solubility in Water:	Not soluble.
Flash Point:	Not flammable.
Upper/Lower Flame Limit:	Not determined.
Auto-ignition Temperature:	Not determined.

10. STABILITY AND REACTIVITY

General: This product is intended for normal welding purposes.

Stability: This product is stable under normal conditions.

Reactivity: Contact of aluminum ribbon with acids may release flammable hydrogen gas.

Hazardous decomposition products of adhesive include carbon monoxide, carbon dioxide and organic compounds.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: No data on product. (Solid article.)

Chronic toxicity: None known.

12. ECOLOGICAL INFORMATION

No data available.

13. 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 is not considered hazardous waste if discarded. Used product contaminated with chromium is considered hazardous waste if discarded. RCRA ID characteristic Toxic Hazardous Waste D007.

Residues from welding consumables and processes could degrade and accumulate in soils and groundwater. When used with welding products, refer to the welding product SDS for information on slag composition.

14. TRANSPORT INFORMATION

No international regulations or restrictions are applicable.

15. REGULATORY INFORMATION

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.

Canada: WHMIS classification: D2B.

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 not considered hazardous.

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 these products 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)
No ingredients listed.	--	--

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: None In use: None

EPCRA/SARA Title III 313 Toxic Chemicals

The following 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
No ingredients listed	Aluminum is a 313 material but only in the fume or dust form.

16. OTHER INFORMATION

This Safety Data Sheet has been revised due to modifications to several paragraphs and/or new format. This SDS supersedes 7985-E.

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 or 1-800-ESAB-123 if you have 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.

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.

R-phrases: None.

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

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