



## SAFETY DATA SHEET

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

**STOODY 110-O**

2018-01-14  
Issued: 2018

172-031

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

#### 1.1. Product identifier

**Trade name** STOODY 110-O

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

**Product type** Composite Wires for Open Arc, Gas Metal Arc, and Submerged Arc Welding

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

**SDS created by** TDS Team

**Supplier** Stody Company

**Street address** 5557 Nashville Road  
Bowling Green, KY 42101  
United States

**Telephone** + 1 270-781-9777

**Fax** + 1 270-782-9237

**Web site** www.stody.com

#### 1.4. Emergency telephone number

**Emergency phone number** (800) 424-9300 (CHEMETREC), CHEMTREC (International): +1 703-527-3887

**Available outside office hours** No

Other

Classification(s): Not specified by AWS

### SECTION 2: Hazards identification

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

The product is not classified

#### 2.2. Label elements

The product do not require labeling



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#### 2.3. Other hazards

Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure, and electrodes used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coating on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of work area, the quality and the amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities).

When the electrode is consumed, the fume and gas decomposition products generated are different in percent and from the ingredients listed in Section 3. Fumes and gas decomposition products that evolve from welding activity and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration in the electrode. Also, new compounds not in the electrodes may form from welding activity. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 3, plus those from the base metal coatings, etc. as noted above.

Reasonably expected decomposition products from normal use of these products include a complex set of oxides of materials listed in Section 3, as well as carbon monoxide, carbon dioxide, ozone and nitrogen oxides. The exposure limits for exposure to chromium, nickel, manganese, cobalt, and/or hexavalent chrome may be reached before the general limit for welding fumes (5 mg/m<sup>3</sup>) is reached.

The recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample in the welder's helmet (if worn) or in the worker's breathing zone. See ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes" and "Characterization of Arc Welding Fume" available from the American Welding Society, 8669 NW 36 #130, Miami, FL 33153.

#### Other

Emergency Overview: This product is not considered hazardous as provided. Gloves should be worn when handling to prevent contaminating hands with product dust. Avoid inhalation of dust and eye contact with this product. When this product is used in a welding process, the most important hazards are welding fumes, heat, radiation and electric shock.



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## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Chemical name	CAS No. EC No. REACH No.	Concentration	Classification	R-phrases H-phrases
IRON	7439-89-6 231-096-4 Registered	60 - 70%	- -	- -
Chromium*	7440-47-3 231-157-5 -	10 - 18%	- -	- -
Manganese	7439-96-5 231-105-1 -	13 - 18%	- -	- -
Nickel	7440-02-0 231-130-8 -	0,5 - 4%	- Carc. 2, Skin Sens. 1, Repr. 2	- H317, H351, H372
Titanium oxide**	13463-67-7 236-675-5 -	<4%	- -	- -
Fluorides	7789-75-5 232-188-7 -	<3%	- -	- -
Magnesium carbonate	546-93-0 208-915-9 -	<2%	- -	- -
Silicon	7440-21-3 231-130-8 -	0,2 - 1%	- -	- -

## 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 irrita 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 lea 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



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#### 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

#### Suitable extinguishing media

Follow all Hot Work procedures. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation such as water, alcohol-resistant foam, dry chemical or CO2 etc

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

Welding arcs and sparks can ignite combustible and flammable materials. Welding activity can produce oxides, manganese and manganese oxides, and iron oxides. See American National Standard Z49.1: Safety in Welding and Cutting published by the AWS.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

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

## SECTION 6: Accidental release measures

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

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 special care when welding painted or coated steels since hazardous substances from the coating may be emitted.

### 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. Ensure collected materials are placed in appropriate containers, particularly if still hot.

### 6.4. Reference to other sections

Refer to section 8/13

## 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.



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#### 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)

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 mg/m <sup>3</sup> -ppm	Short-term exposure limit mg/m <sup>3</sup> -ppm	Ceiling exposure limit mg/m <sup>3</sup> -ppm	Remark	Source
Manganese	7439-96-5	231-105-1	-	-	5	as Mn (metal and fume)	OSHA
Silicon	7440-21-3	231-130-8	15	-	-	Total dust	OSHA
Silicon	7440-21-3	231-130-8	5	-	-	respirable fraction	OSHA
Chromium*	7440-47-3	231-157-5	1	-	-	as metal	OSHA
Chromium*	7440-47-3	231-157-5	0,5	-	-	as Cr(Cr(II) and Cr(III) inorganic compounds)	OSHA
Chromium*	7440-47-3	231-157-5	0,005	-	-	as Cr(VI)(water sol. and insol. inorganic compounds)	OSHA
Titanium oxide**	13463-67-7	236-675-5	15	-	-	Total dust	OSHA
Fluorides	7789-75-5	232-188-7	2,5	-	-	as F	OSHA
Nickel	7440-02-0	231-130-8	1	-	-	AS Ni	OSHA
IRON	7439-89-6	231-096-4	-	-	-	NO PEL	OSHA
Magnesium carbonate	546-93-0	208-915-9	15	-	-	TOTAL DUST	OSHA
Magnesium carbonate	546-93-0	208-915-9	5	-	-	RESPIRABLE FRACTION	OSHA



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#### 8.2. Exposure controls

##### Technical precaution measures

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

##### Respiratory protection

Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area.

##### Other

Engineering measures: 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.

EU Specification EN 12477: Gloves for Welders Type A. For eye protection, use a welder's helmet compliant to EN 379 with filter shade 9 or greater. Clothing should meet Class 2 requirements.

##### 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.

## SECTION 9: Physical and chemical properties

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

##### Appearance

Cored wire, color grey/black, with core containing solid metal and non-metal particles.

##### Appearance, colour

Not applicable

##### Appearance, physical state

Not applicable

##### Auto-ignition temperature

Not applicable

##### Decomposition temperature

Not applicable

##### Evaporation rate

Not applicable

##### Explosive properties

Not applicable

##### Flammability (solid, gas)

Not applicable

##### Flash point

Not applicable

##### Initial boiling point and boiling range

Not applicable

##### Melting point

>1000°F (>500°C)

##### Melting point / freezing point

Not applicable

##### Odour

odourless

##### Odour threshold

Not applicable

##### Oxidising properties

Not applicable

##### Partition coefficient: n-octanol / water

Not applicable



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**pH value** Not applicable

**Relative density** 0.18 – 0.33 lb/cu ft. (5 – 9 g/cc)

**Solubility** Insoluble in water

**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

**Conditions to avoid** This product is only intended for production of welding consumables.

#### 10.5. Incompatible materials

Not applicable

#### 10.6. Hazardous decomposition products

##### Hazardous decomposition products

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 and coating.

The amount of fumes generated from this product varies with welding parameters and dimensions, but generally no more than 10g/min. Reasonably expected fume constituents of this product would include oxides of metals such as Al, B, C, Ca, Co, Cr, Cu, F, Fe, K, Mn, Mo, N, Na, Nb, O, Si, Ti, V, W, Zr.





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#### 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 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. Fume generation and fume analysis, including hexavalent chrome content is available for a range of products and may be obtained by sending a request in writing or sending us an inquiry on the Stoodly Company web page ([www.stoodly.com](http://www.stoodly.com)).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Information on toxicological effects

The wire product as sold and distributed is not expected to cause hazardous exposures. During welding activity, the likely routes of exposure could include ingestion, skin, eyes but most importantly by inhalation of welding fumes and dust. 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 contaminants and processes. The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans (Group 2B).

#### Acute toxicity

Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness, 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

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.)

\*This product contains substance(s) that may cause cancer, which is/are classified as Carcinogenic to humans as per IARC.

\*\*This product contains substance(s) that may cause cancer, which is/are classified as Possibly carcinogenic to humans as per IARC.

#### 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

##### 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 nerv system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscula weakness, psychological disturbances and spastic gait Prolonged inhalation of nickel and chromium compounds above safe exposure limits can cause cancer. Prolonged inhalation of titanium dioxide above safe exposure limits can cause cancer.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute toxicity

No data available

#### Toxicity

No data available

#### Aquatic

No data available

#### Soil

No data available

#### Acute fish toxicity

No data available

#### Acute algae toxicity

No data available

#### Acute crustacean toxicity

No data available

#### Chronical toxicity

No data available

### 12.2. Persistence and degradability

#### Persistence and degradability

No data available

#### Decay/transformation

No data available

### 12.3. Bioaccumulative potential

#### Bioaccumulative potential

No data available

### 12.4. Mobility in soil

#### Mobility

No data available

### 12.5. Results of PBT and vPvB assessment

#### Results of PBT and vPvB assessment

No data available

### 12.6. Other adverse effects

#### Other adverse effects

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 cou lead to accumulation in soils or groundwater. Nickel powder is harmful for the environment, harmful to aquatic organisms, and may cause long term adverse effects in the aquatic environment. The biological concentration factors, BCF, of components of these wires that may be pres



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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:

Unused product or product residues containing chromium is considered hazardous waste if discarded, RCRA ID Characteristic Toxic Hazardous Waste D007.

(<https://rcrainfo.epa.gov/rcrainfoweb/action/modules/main/glossary/waste.jsessionid=A98F2456754BC0CE970C52F4E3AA>)  
Residues from welding consumables and processes could degrade and accumulate in soils and groundwater. Welding slag from this product typically contains mainly the following components: Al, B, C, Ca, Co, Cr, Cu, F, Fe, K, Mn, Mo, N, Na, Nb, O, S, V, W, Zr.

## 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

#### Environmental hazards

Welding rods and wire are not environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID and AND) and/or a marine pollutant to the IMDG

### 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

#### Other

No international regulations or restrictions are 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 the 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

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

Regulation of the Minister of the Environment of 9 December 2014 on waste catalogue (Journal of Laws 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 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): Products 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 Chemicals" and potential subject to annual SARA 313 reporting. See Section 3 for weight percent.

Manganese: 1.0% de minimis concentration

Chromium: 1.0% de minimis concentration

Nickel: 0.1% de minimis concentration

Canada: WHMIS classification: Class D; Division 2, Subdivision A

##### International Inventories:

Australia: The substance(s) in this product is/are in compliance with the inventory requirements of Australian Inventory of Chemical Substances (AICS)

United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory 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

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.



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

### Phrase meaning

Carc. 2 - Carcinogenicity, hazard category 2  
Repr. 2 - Reproductive toxicity, hazard category 2  
Skin Sens. 1 - Skin sensitisation, hazard category 1  
H317 - May cause an allergic skin reaction.  
H351 - Suspected of causing cancer.  
H372 - Causes damage to organs through prolonged or repeated exposure.

### 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, 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 Fun 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.

ESAB requests the users of this product to study this Safety Data Sheet (SDS) and become aware of the 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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