

# SAFETY DATA SHEET

## ESAB 7018

### SECTION 1: Identification

#### 1.1. Product identifier

**Trade name**

ESAB 7018

**Product no.**

255440018, 255440026, 255440034, 255440042, 7018253V8K, 7018314V8K, 7018404V8K, 7018504V8K

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

**Relevant identified uses of the substance or mixture**Arc Welding  
Restricted to professional users.**Uses advised against**

None known.

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

**Company and address****ESAB Welding & Cutting Products**  
801 Wilson Ave.  
PA 17331 Hanover  
USA  
1-717-637-8911  
[https://esab.com/us/nam\\_en/](https://esab.com/us/nam_en/)**Contact person**

Product Stewardship Team

**E-mail**

Sustainability@esab.com

**SDS date**

1/29/2025

**SDS Version**

3.0

#### 1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® ([triage.webpoisoncontrol.org](http://triage.webpoisoncontrol.org)) to get specific guidance for your case  
See also section 4 "First aid measures".

### SECTION 2: Hazard(s) identification

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

Not classified according to HCS (29 CFR 1910.1200)

## 2.2. Label elements

### Hazard pictogram(s)

Not applicable.

### Signal word

Not applicable.

### Hazard statement(s)

### Precautionary statement(s)

General

-

Prevention

-

Response

-

Storage

-

Disposal

-

### Additional labelling

Not applicable.

## 2.3. Other hazards

## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Iron	CAS No.: 7439-89-6	60 - 100%		
LIMESTONE	CAS No.: 1317-65-3	5-10%		[19]
FLUORIDES	CAS No.: 7789-75-5	5-10%		
Silicate Binder (Sodium Silicate)	CAS No.: 1344-09-8	1 - 5%		
TITANIUM OXIDE**	CAS No.: 13463-67-7	1 - 5%	Carc. 2, H351	
Feldspar	CAS No.: 68476-25-5	1 - 5%	Eye Irrit. 2, H319 STOT SE 3, H335	[19]
MANGANESE	CAS No.: 7439-96-5	1 - 5%		
Quartz*	CAS No.: 14808-60-7	0.1 - 1%	STOT RE 1, H372	
SILICATE BINDER (POTASSIUM SILICATE)	CAS No.: 1312-76-1	0.1 - 1%		
Cellulose	CAS No.: 9004-34-6	0.1 - 1%		

Silicon	CAS No.: 7440-21-3	0.1 - 1%		
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Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

#### General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

In case of discomfort: bring the person into fresh air.

#### Skin contact

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

#### Eye contact

Rinse gently with lukewarm water. Remove any contact lenses if this is easy to do. Continue rinsing. In case of persistent eye irritation or discomfort: Seek medical help.

#### Ingestion

Rinse and flush mouth thoroughly and consume large quantities of water. In case of continued discomfort: seek medical assistance and bring this safety data sheet.

#### Burns

Not applicable.

### 4.2. Most important symptoms and effects, both acute and delayed

None known.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### Information to medics

Bring this safety data sheet or the label from this product.

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds  
Some metal oxides

### 5.3. Advice for firefighters

No specific requirements.

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation, especially in confined areas.  
Contaminated areas may be slippery.

### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.  
Keep unauthorized persons away from the spill

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

Limit spillage, sweep up and shovel into appropriate containers for disposal. Store in suitable, closed containers for disposal.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.  
See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

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

No special conditions required.

#### Recommended storage material

Always store in containers of the same material as the original container.

#### Storage conditions

No specific requirements

#### Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### LIMESTONE

Long term exposure limit (OSHA Table Z-1) (mg/m<sup>3</sup>): 15 (total dust) / 5 (Respirable fraction)

Long term exposure limit (NIOSH REL) (mg/m<sup>3</sup>): 10 (Total dust), 5 (Respirable fraction)

#### TITANIUM OXIDE\*\*

Long term exposure limit (ACGIH TLV) (mg/m<sup>3</sup>): 10

Long term exposure limit (NIOSH REL) (mg/m<sup>3</sup>): Potential occupational carcinogen; (ultrafine particles) / 2.4 (fine) / 0.3 (ultrafine)

#### MANGANESE

Short term exposure limit (STEL) (NIOSH REL) (mg/m<sup>3</sup>): 3

Long term exposure limit (OSHA Table Z-1) (mg/m<sup>3</sup>): (Ceiling limit) 5

Long term exposure limit (ACGIH TLV) (mg/m<sup>3</sup>): 0.02 (resp.) / 0.1 (Inhalable) / (for elemental and inorganic compounds)

Long term exposure limit (NIOSH REL) (mg/m<sup>3</sup>): 1

#### Quartz\*

Long term exposure limit (ACGIH TLV) (mg/m<sup>3</sup>): 0.025 (resp.) for  $\alpha$ -quartz and cristobalite

Long term exposure limit (NIOSH REL) (mg/m<sup>3</sup>): Potential occupational carcinogen; 0.05

#### Cellulose

Long term exposure limit (OSHA Table Z-1) (mg/m<sup>3</sup>): 15 (total dust) / 5 (Respirable fraction)

Long term exposure limit (ACGIH TLV) (mg/m<sup>3</sup>): 10 (Total dust)

Long term exposure limit (NIOSH REL) (mg/m<sup>3</sup>): 10 (Total dust), 5 (Respirable fraction)

#### Silicon

Long term exposure limit (OSHA Table Z-1) (mg/m<sup>3</sup>): 15 (total dust) / 5 (Respirable fraction)

Long term exposure limit (NIOSH REL) (mg/m<sup>3</sup>): 10 (Total dust), 5 (Respirable fraction)

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

### 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

#### General recommendations

If possible, avoid working processes where respiratory quartz dust may be developed.

Smoking, drinking and consumption of food is not allowed in the work area.

#### Exposure scenarios

There are no exposure scenarios implemented for this product.

#### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

#### Appropriate technical measures

Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above).

Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and showers are clearly marked.

**Hygiene measures**

Wash hands after use.

**Measures to avoid environmental exposure**

No specific requirements.

**Individual protection measures, such as personal protective equipment**


**Generally**

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

**Respiratory Equipment**

Keep your head out of fumes. Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area. An approved respirator should be used unless exposure assessments are below applicable exposure limits.

**Skin protection**

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn. Wear a protective suit in the event of prolonged periods of work with the product.	-	-	

**Hand protection**

Wear Protective Gloves

**Eye protection**

Wear helmet or use face shield with filter lens for open arc welding processes. As a rule of thumb begin with Shade Number 14. Adjust if needed by selecting the next lighter and/or darker shade number. Provide protective screens and flash goggles, if necessary, to shield others from the weld arc flash

**SECTION 9: Physical and chemical properties**

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

**Physical state**

Solid

**Color**

Various colours

**Odor**

No relevant or available data due to the nature of the product.

**Odor threshold (ppm)**

No relevant or available data due to the nature of the product.

**pH**

No relevant or available data due to the nature of the product.

**Density (g/cm<sup>3</sup>)**

No relevant or available data due to the nature of the product.

**Kinematic viscosity**

Does not apply to solids.

**Particle characteristics**

No relevant or available data due to the nature of the product.

## Phase changes

### Melting point/freezing point (°F)

No relevant or available data due to the nature of the product.

### Softening point/range (°F)

Does not apply to solids.

### Boiling point (°F)

Does not apply to solids.

### Vapor pressure

No relevant or available data due to the nature of the product.

### Relative vapor density

Does not apply to solids.

### Decomposition temperature (°F)

No relevant or available data due to the nature of the product.

## Data on fire and explosion hazards

### Flash point (°F)

Does not apply to solids.

### Flammability (°F)

No relevant or available data due to the nature of the product.

### Auto-ignition temperature (°F)

No relevant or available data due to the nature of the product.

### Explosion limits (% v/v)

Does not apply to solids.

## Solubility

### Solubility in water

No relevant or available data due to the nature of the product.

### n-octanol/water coefficient (LogKow)

No relevant or available data due to the nature of the product.

### Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

## 9.2. Other information

### Other physical and chemical parameters

No data available.

### Oxidizing properties

No relevant or available data due to the nature of the product.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Non Reactive unless gets in contact with chemical substances like acids or strong bases could cause generation of gas

### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### 10.3. Possibility of hazardous reactions, including those associated with foreseeable emergencies

None known.

### 10.4. Conditions to avoid

This product is only intended for normal welding purposes.

### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

Acute toxicity: Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eye

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Serious eye damage/irritation

Based on available data, the classification criteria are not met.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Long term effects

None known.

### Other information

TITANIUM OXIDE\*\* has been classified by IARC as a group 2B carcinogen.  
Quartz\* has been classified by IARC as a group 1 carcinogen.

## SECTION 12: Ecological information

### 12.1. Toxicity

No data available.

### 12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

### 12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

### 12.6. Other adverse effects

None known.

## SECTION 13: Disposal considerations

### RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)

None of the components are listed

### Specific labelling

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informatio n:
DOT	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

\* Packing group

\*\* Environmental hazards

### Additional information

Not dangerous goods according to DOT, IATA and IMDG.

#### 14.6. Special precautions for user

Not applicable.

#### 14.7. Transport in bulk according to IMO instruments

No data available.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.2. U.S. Federal regulations

##### TSCA (the non-confidential portion)

Iron is listed  
LIMESTONE is listed  
FLUORIDES is listed  
Silicate Binder (Sodium Silicate) is listed  
TITANIUM OXIDE\*\* is listed  
Feldspar is listed  
MANGANESE is listed  
Quartz\* is listed  
SILICATE BINDER (POTASSIUM SILICATE) is listed  
Cellulose is listed  
Silicon is listed

##### Clean Air Act

MANGANESE is regulated as a hazardous air pollutant (HAPS)

##### EPCRA Section 302

None of the components are listed

##### EPCRA Section 304

None of the components are listed

##### EPCRA section 313

MANGANESE is listed

##### CERCLA

None of the components are listed

##### Hazardous chemical inventory reporting

This product is not subject to Tier II reporting.

#### State regulations

##### California / Prop. 65

None of the components are listed

##### Massachusetts / Right To Know Act

LIMESTONE is listed  
TITANIUM OXIDE\*\* is listed  
MANGANESE is listed  
Quartz\* is listed  
Cellulose is listed  
Silicon is listed

##### New Jersey / Right To Know Act

LIMESTONE / Substance number: 4001

—  
TITANIUM OXIDE\*\* / Substance number: 1861

—  
MANGANESE / Substance number: 1155  
MANGANESE is on the Special Health Hazard Substance List

—  
Quartz\* / Substance number: 1660  
Quartz\* is on the Special Health Hazard Substance List

—  
Cellulose / Substance number: 3227

—  
Silicon / Substance number: 3125  
Silicon is on the Special Health Hazard Substance List

#### **New York / Right To Know Act**

FLUORIDES is listed  
FLUORIDES is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds

—  
TITANIUM OXIDE\*\* is listed  
TITANIUM OXIDE\*\* is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds

—  
MANGANESE is listed  
MANGANESE is regulated with a Treshold Reporting Quantity (TRQ) of: 10 pounds

#### **Pennsylvania / Right To Know Act**

LIMESTONE is listed

—  
TITANIUM OXIDE\*\* is listed

—  
MANGANESE is listed  
MANGANESE is hazardous to the environment (E)

—  
Quartz\* is listed

—  
Cellulose is listed

—  
Silicon is listed

#### **15.4. Restrictions for application**

Restricted to professional users.

#### **15.5. Demands for specific education**

No specific requirements.

#### **15.6. Additional information**

Not applicable.

#### **15.7. Chemical safety assessment**

No

#### **15.8. Sources**

OSHA Hazard Communication Standard (29 CFR 1910.1200)

## SECTION 16: Other information

### Full text of H-phrases as mentioned in section 3

- H319, Causes serious eye irritation.
- H335, May cause respiratory irritation.
- H351, Suspected of causing cancer.
- H372, Causes damage to organs through prolonged or repeated exposure.

### The full text of identified uses as mentioned in section 1

None known.

### Abbreviations and acronyms

- ACGIH = American Conference of Governmental Industrial Hygienists
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- CAS = Chemical Abstracts Service
- CERCLA = Comprehensive Environmental Response Compensation and Liability Act
- DOT = Department of Transportation
- EINECS = European Inventory of Existing Commercial chemical Substances
- EPCRA = Emergency Planning and Community Right-To-Know Act
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- HCIS = Hazardous Chemical Information System
- HNOC = Hazards Not Otherwise Classified
- IARC = International Agency for Research on Cancer
- IATA = International Air Transport Association
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- NFPA = National Fire Protection Association
- NIOSH = National Institute for Occupational Safety and Health
- OECD = Organisation for Economic Co-operation and Development
- OSHA = Occupational Safety and Health Administration
- PBT = Persistent, Bioaccumulative and Toxic
- RCRA = Resource Conservation and Recovery Act
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- RRN = REACH Registration Number
- SARA = Superfund Amendments and Reauthorization Act
- SCL = A specific concentration limit.
- STEL = Short-term exposure limits
- STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
- STOT-SE = Specific Target Organ Toxicity - Single Exposure
- TSCA = The Toxic Substances Control Act
- TWA = Time weighted average
- UN = United Nations
- UVBC = Unknown or variable composition, complex reaction products or of biological materials
- VOC = Volatile Organic Compound
- vPvB = Very Persistent and Very Bioaccumulative

### Additional information

Not applicable.

**The safety data sheet is validated by**

Product Stewardship Team

**Other**

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en