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

1.1 Product identifier
- Trade name: BÖHLER Pipeshield 71 T8-FD
- CAS Number: -
- EINECS Number: -

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

Application of the substance / the mixture
Flux cored wire
The product is a manufactured article in the sense of Article 3 No. 3, 1907/2006/EC (REACH). The purpose of the present safety data sheet is therefore to provide instruction on safe usage of the product.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
voestalpine Böhler Welding Austria GmbH
Böhler-Welding-St. 1
8605 Kapfenberg

Tel.: +43/50304/31-0
Fax: +43/50304/71-95193
www.voestalpine.com/welding

Further information obtainable from:
Research and Development
Deniece Fiedler
+43/50304/31-28299;
Deniece.Fiedler@voestalpine.com

1.4 Emergency telephone number:
NCEC
+44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
The Product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008 Void
- Hazard pictograms Void
- Signal word Void
- Hazard statements Void

2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS</th>
<th>EINECS</th>
<th>Index number</th>
<th>Reg.nr.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>barium fluoride</td>
<td>7787-32-8</td>
<td>232-108-0</td>
<td>056-002-00-7</td>
<td>01-2120767461-52-XXXX</td>
<td>5-12.5%</td>
</tr>
<tr>
<td>lithium fluoride</td>
<td>7789-24-4</td>
<td>232-152-0</td>
<td></td>
<td></td>
<td>0.1-2.5%</td>
</tr>
<tr>
<td>barium</td>
<td>7440-39-3</td>
<td>231-149-1</td>
<td></td>
<td></td>
<td>0.1-2.5%</td>
</tr>
<tr>
<td>aluminium</td>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>013-001-00-6</td>
<td>01-2119529243-45-XXXX</td>
<td>0.1-2.5%</td>
</tr>
<tr>
<td>magnesium powder (pyrophoric)</td>
<td>7439-95-4</td>
<td>231-104-6</td>
<td>012-001-00-3</td>
<td>01-2119537203-49-XXXX</td>
<td>0.1-2.5%</td>
</tr>
<tr>
<td>manganese</td>
<td>7439-96-5</td>
<td>231-105-1</td>
<td></td>
<td>01-2119449803-34-XXXX</td>
<td>0.1-2.5%</td>
</tr>
</tbody>
</table>

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Seek medical treatment.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

For deletion of fire just use dry powders. Don’t use any water or halogenated containing extinguishing agents.
Trade name: BÖHLER Pipeshield 71 T8-FD

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**
  Ensure adequate ventilation
  Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**
  Ensure that suitable extractors are available on processing machines
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: None.
- **7.3 Specific end use(s)**
  No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
  - 7787-32-8 barium fluoride
    - IOELV: Long-term value: 2.5 mg/m³ as F
  - 7789-24-4 lithium fluoride
    - IOELV: Long-term value: 2.5 mg/m³ as F
  - 7439-96-5 manganese
    - IOELV: Long-term value: 0.2* 0.05** mg/m³ as Mn; *inhalable, **respirable fraction

- **8.2 Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
    - **Respiratory protection:** Filter P2
    - **Protection of hands:**
      - EN 12477
      - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    - **Material of gloves** Leather gloves

(Contd. on page 4)
Safety data sheet
according to 1907/2006/EC, Article 31

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- **Penetration time of glove material**
The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection**: Safety glasses
- **Body protection**: Protective work clothing

### SECTION 9: Physical and chemical properties

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

- **General Information**
  - **Appearance**:
    - Form: Solid
    - Colour: According to product specification
  - **Odour**: Odourless
  - **Odour threshold**: Not determined.
- **pH-value**: Not applicable.
- **Flash point**: Not applicable.
- **Flammability (solid, gas)**: Not determined.
- **Decomposition temperature**: Not determined.
- **Auto-ignition temperature**: Product is not self-igniting.
- **Explosive properties**: Product does not present an explosion hazard.
- **Explosion limits**:
  - Lower: Not determined.
  - Upper: Not determined.
- **Density**: Not determined.
- **Relative density**: Not determined.
- **Vapour density**: Not applicable.
- **Evaporation rate**: Not applicable.
- **Partition coefficient: n-octanol/water**: Not determined.
- **Dynamic**: Not applicable.
- **Kinematic**: Not applicable.
- **Solvent separation test**:
  - **Solids content**: 100.0 %
- **9.2 Other information**
  No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
  - **Thermal decomposition / conditions to be avoided**:
    No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Attacks materials containing glass and silicate.
53.2.1

10.4 Conditions to avoid: No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

LD/LC50 values relevant for classification:

- 7787-32-8 barium fluoride
  - Oral LD50: 250 mg/kg (rat)

Primary irritant effect:

- 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 or skin sensitisation: Based on available data, the classification criteria are not met.
- Additional toxicological information:
  - Repeated dose toxicity
  - 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.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

- General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects: No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation: Must be specially treated adhering to official regulations.

European waste catalogue

- 12 01 13 welding wastes

(Contd. on page 6)
Trade name: BÖHLER Pipeshield 71 T8-FD

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN-Number**
  - ADR, ADN, IMDG, IATA: Void
- **14.2 UN proper shipping name**
  - ADR, ADN, IMDG, IATA: Void
- **14.3 Transport hazard class(es)**
  - ADR, ADN, IMDG, IATA: Void
- **14.4 Packing group**
  - ADR, IMDG, IATA: Void
- **14.5 Environmental hazards:**
  - Marine pollutant: No
- **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.
- **Transport/Additional information:**
  - Not dangerous according to the above specifications.
- **UN "Model Regulation":**
  - Void

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - No further relevant information available.
- **Directive 2012/18/EU**
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 27
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
  - None of the ingredients is listed.
- **REGULATION (EU) 2019/1148**
  - Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
    - None of the ingredients is listed.
  - Annex II - REPORTABLE EXPLOSIVES PRECURSORS
    - None of the ingredients is listed.
53.2.1 Recommendations:

- Regulation (EC) No 273/2004 on drug precursors
  7723-14-0 phosphorus
- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
  7723-14-0 phosphorus

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Additional information:
Recommendations for exposure scenarios, measures for risk management and identification of working conditions under which metals, metal alloys and products made of metal can be safely worked can be found attached. Detailed information can be found on our webpage www.voestalpine.com (Environment, REACH at voestalpine).

Relevant phrases
H228 Flammable solid.
H250 Catches fire spontaneously if exposed to air.
H261 In contact with water releases flammable gases.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Training hints:

Department issuing SDS: Research and Development
Contact: Deniece Fiedler

Abbreviations and acronyms:
NCEC - National Chemical Emergency Centre (= Carechem24)
ADR - Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Dangerous Substances, BAuA, Germany)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Sol. 1: Flammable solids – Category 1
Pyr. Sol. 1: Pyrophoric solids – Category 1
Water-react. 2: Substances and mixtures which in contact with water emit flammable gases – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.