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

• 1.1 Product identifier
• Trade name: VITROVAC® 7500 Q75
• Detailed descriptions:
  ® registered trademark of VACUUMSCHMELZE GmbH & Co. KG
• Information sheet - no.: IB125
• Remarks for information sheet
  Our semi-finished and finished products constitute manufactured articles under the terms of the REACH Regulation (EC) No. 1907/2006.
  Articles are not subject to any legal obligation concerning production and distribution of material safety data sheets. The detailed information usually shown in a safety data sheet will be provided in the form of an 'Information sheet for articles' for specific alloys.
  However, we expressly point out that these information sheets for articles are voluntarily produced data sheets which are not governed by the requirements of the REACH regulation.
• 1.2 Relevant identified uses of the substance or mixture and uses advised against Not applicable
• Application of the article: semi-finished products and parts
• 1.3 Details of the supplier of the information sheet
• Manufacturer/Supplier:
  VACUUMSCHMELZE GmbH & Co.KG
  Grüner Weg 37
  D-63450 Hanau
  datasheet@vacuumschmelze.com
• Further information obtainable from: Environmental Protection Department
• 1.4 Emergency telephone number:
  Tel. no.: (**49) 6181/38-0
  Emergency tel. no.: via (**49) 6181/38-0

SECTION 2: Hazards identification

• 2.2 Classification (substance or mixture)
  Classification according to Regulation (EC) No 1272/2008 (CLP-Regulation):
  Not applicable
  For articles there is no obligation to classify acc. to CLP -Regulation.
• 2.2 Labelling according to Regulation (EC) No 1272/2008
  Labelling according to Regulation (EC) No 1272/2008 (CLP-Regulation):
  Void
• Additional VAC information:
  In the case of dust-producing processing, we recommend observance of the following warnings :
  • Hazard statements Void
  • Precautionary statements
    Do not breathe dust/fume/gas/mist/vapours/spray.
    Use personal protective equipment as required.
  • Additional information:
    Safety data sheet available on request.
• 2.3 Other hazards
  Danger of accident!
  Always wear protective clothing, protective glasses and safety gloves when handling the bands.
  - The bands have sharp edges. There is a danger of (serious) injury from cuts.
  - The bands can split and cause (serious) cuts when bent excessively

(Contd. on page 2)
Trade name: **VITROVAC® 7500 Q75**

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients**

- **3.2 Chemical characterization:**
- **Description:** Metal in compact form
- **Components (composition):**
  The classifications given below reflect the classification of each pure substance respectively and are intended for information only

<table>
<thead>
<tr>
<th>CAS</th>
<th>Description</th>
<th>RTECS</th>
<th>Acute Tox.</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-42-8</td>
<td>boron</td>
<td>ED 7350000</td>
<td>H302</td>
<td>&lt;3%</td>
</tr>
<tr>
<td>7439-89-6</td>
<td>iron (compact form)</td>
<td>NO 4565500</td>
<td></td>
<td>rest%</td>
</tr>
<tr>
<td>7440-21-3</td>
<td>silicon</td>
<td></td>
<td></td>
<td>~6%</td>
</tr>
</tbody>
</table>

- **Additional information:** -

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
  - **After inhalation:**
    If metal vapours or dusts have been inhaled:
    Get the affected person out in the fresh air and call a doctor.
  - **After skin contact:**
    Foreign bodies which have penetrated the skin must be removed and the wound cleaned thoroughly.
  - **After eye contact:**
    Foreign bodies must be removed, consult a doctor if necessary.
    Beware of metal splinters - Consult a doctor immediately.
  - **After swallowing:** Consult a doctor if the symptoms persist.

- **4.2 Most important symptoms and effects, both acute and delayed**
  No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
  - Non-combustible.
  - Extinguishing agents must be adapted to the environment.

- **5.2 Special hazards arising from the substance or mixture**
  Formation of toxic smoke / fumes (metal / metal oxides) is possible during heating or in case of fire. Do not inhale fumes.
5.3 Advice for firefighters

Protective equipment: No special measures required.

SECTION 6: Accidental release measures

Accidental release of dusts and vapours which are damaging to health can be ruled out.

6.1 Personal precautions, protective equipment and emergency procedures: No special measures required.

6.2 Environmental precautions: No special measures required.

6.3 Methods and material for containment and cleaning up: No special measures required.

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

Danger of accident!
Always wear protective clothing, protective glasses and safety gloves when handling the bands.
- The bands have sharp edges. There is a danger of (serious) injury from cuts.
- The bands can split and cause (serious) cuts when bent excessively.

No more safety precautions are necessary in the delivered form.
The appropriate industrial and environmental safety measures must be taken for processing steps which cause dust (see also section 8):
Ensure good ventilation/exhaustion at the workplace.
Take note of emission threshold.

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: Not applicable
Storage class: Not applicable
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities:
Suction and filtering and good ventilation of the working area must be provided for processes where dust is formed.
Approved industrial vacuum cleaners of at least dust class L must be used (DIN EN 60335-2-69).
Suitable breathing apparatus must be used during repair and maintenance work on suction systems (see personal safety equipment).

(Contd. on page 4)
### 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

For International Limit Values see Additional information below.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-42-8 boron</td>
<td>MAK (Germany) Long-term value: 0.75E mg/m³</td>
</tr>
</tbody>
</table>

**DNELs**

DNELs for OSH purposes

In Germany, occupational exposure limits (AGW) of the Technical Rules on Hazardous Substances (TRGS) 900 continue to constitute workplace atmospheric limit values that are binding upon employers. Should no AGW and for example no maximum workplace concentration (MAK value) of the German Research Foundation (DFG) be available, the employer must also consider the DNEL during risk assessment.

(Source: Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA))

Current values are available: [http://www.dguv.de/ifas/gestis/gestis-dnel-liste/index.jsp](http://www.dguv.de/ifas/gestis/gestis-dnel-liste/index.jsp).

**Additional Occupational Exposure Limit Values for possible hazards during processing:**

Compliance with the general dust limit value(s) (lung penetrating and/or inhalable fraction) must be ensured. If the occurrence of Boric acid/ Boron oxide cannot be ruled out, the appropriate workplace-related limit values must also be monitored!

**Additional information:**

- The lists valid during the making were used as basis.
- GESTIS International Limit Values:

### 8.2 Exposure controls

**Personal protective equipment:**

**General protective and hygienic measures:** Wash hands before breaks and at the end of work.

**Respiratory protection:**

In the case of dust formation (limit value exceeded), breathing apparatus must be worn.

- Breathing mask, apparatus with particle filter P1 or P2, for example:
  - Breathing mask (EN 149) FFP1 or FFP2
  - 4 times the limit value (FFP1)
  - 10 times the limit value (FFP2)

**Protection of hands:**

Not required.

Preventive skin protection by use of skin-protecting agents is recommended.

**Material of gloves:**

- Penetration time of glove material: Omitted

**Eye protection:**

In the case of larger quantities of dust:

- Wear protective glasses / EN 166, poss. with side protection.

**Limitation and supervision of exposure into the environment**

The legal issue values and limitations are to be paid attention!
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information
  - Appearance:
    - Form: Strip
    - Colour: Metallic
    - Odour: Odourless
  - pH-value: Not applicable.
  - Change in condition
    - Melting point/Melting range (approx.): 1,100-1,200 °C
  - Auto-ignition temperature: Not applicable
  - Explosive properties: Not applicable
  - Vapour pressure: Not determined.
  - Density (approx.) at 20 °C: 7.1 g/cm³
  - Relative density: Not determined.
  - Solubility in / Miscibility with water: Insoluble.
  - Other information
    - No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No further relevant information available.

10.2 Chemical stability

10.3 Possibility of hazardous reactions
Hydrogen is released in contact with acid which can cause explosive gas mixtures.

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.

11.2 LD/LC50 values:

- 7440-42-8 boron
  - Oral LD50: 650 mg/kg (rat)

- Primary irritant effect:

- Skin corrosion/irritation
  - Based on available data, the classification criteria are not met.

- Serious eye damage/irritation
  - Irritation of the eyes in the case of massive direct contact will be mainly due to mechanical effects depending on the grain size.

- Respiratory or 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.
### 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:** Alloys in solid form do not pose an ecological threat.
- **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** Observe official regulations.
- **Uncleaned packaging:** Not applicable

### SECTION 14: Transport information

- **Transport/Additional information:**
  - **Land transport ADR/RID (cross-border):**
    - **Remarks:** Non-hazardous goods from the standpoint of the specified regulations
  - **Maritime transport IMDG:**
    - **Remarks:** Non-hazardous goods from the standpoint of the specified regulations
  - **Air Transport ICAO-TI and IATA-DGR:**
    - **Remarks:** Non-hazardous goods from the standpoint of the specified regulations

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - **National regulations:**
  - **Other regulations, limitations and prohibitive regulations**
    - e.g.
      - 1272/2008/EG (CLP)
      - 1907/2006/EG (REACH)
      - German Hazardous Substances
      - TRGS 561 / TRGS 910

(Contd. on page 7)
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.

• Relevant phrases
  H302 Harmful if swallowed.

• Department issuing SDS:
  Department OPS-C SE
  Tel. 06181/38-2045

• Contact:
  Environmental Protection Department
  Tel. 06181/38-2359

• Abbreviations and acronyms:
  RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  ADR: Accord européen sur le transport 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
  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)
  DNEL: Derived No-Effect Level (REACH)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Acute Tox. 4: Acute toxicity - oral – Category 4

• Sources
  - KÜHN-BIRETT-Merkblätter gefährlicher Arbeitsstoffe
  - Technische Regeln für Gefahrstoffe

* Data compared to the previous version altered.