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

1.1. Product identifier
- Trade name or designation of the mixture: JADECAST 95
- Registration number: None.
- Synonyms: None.
- Brand Code: 417B
- Issue date: 05-February-2018
- Version number: 01

1.2. Relevant identified uses of the substance or mixture and uses advised against
- Identified uses: For Industrial Use Only
- Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet
- Company: HarbisonWalker International
- Address: 1305 Cherrington Parkway, Suite 100
- Moon Township, PA 15108, USA
- United States
- Division: Not available.
- Telephone: General Phone: 412-375-6600
- CHEMTREC EMERGENCY: 1-800-424-9300
- e-mail: sds@thinkHWI.com
- Contact person: HWI USA

1.4. Emergency telephone number: Not available.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
- The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended
- This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary
- Exposure to powder or dusts may be irritating to eyes, nose and throat.

2.2. Label elements
- Label according to Regulation (EC) No. 1272/2008 as amended
  - Contains: Boric acid
  - Hazard pictograms: None.
  - Signal word: None.
  - Hazard statements: The mixture does not meet the criteria for classification.

Precautionary statements
- Prevention: Observe good industrial hygiene practices.
- Response: Wash hands after handling.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of waste and residues in accordance with local authority requirements.
Supplemental label information

After installation and during service, exposure of this product to high temperature and/or certain chemical elements may cause a change to occur to this product and create chrome (VI) compounds. Therefore, during tear out, care should be taken in the removal and handling of this product. Exposure to chrome (VI) compounds may cause cancer. Excessive inhalation will increase the risk of serious respiratory damage. Limit contact with eyes, skin, and mucous membranes since chrome (VI) compounds are also corrosive and may cause skin and nasal septum ulcers. NIOSH approved respirators and protective clothing should be worn while handling this product during tear out.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous)</td>
<td>10 - 20</td>
<td>1344-28-1</td>
<td>215-691-6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Boric acid</td>
<td>0,1 - 1</td>
<td>10043-35-3</td>
<td>233-139-2</td>
<td>-</td>
<td>005-007-00-2</td>
</tr>
<tr>
<td>TRADE SECRET</td>
<td>0,1 - 1</td>
<td>Proprietary</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Classification: -

Other components below reportable levels 80 - 90

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

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

Dusts may irritate the respiratory tract, skin and eyes.

4.3. Indication of any immediate medical attention needed

Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards

Not available.

5.1. Extinguishing media

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Not available.

5.2. Special hazards arising from the substance or mixture

Not available.
5.3. Advice for firefighters
Special protective equipment for firefighters Not available.
Special fire fighting procedures Not available.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.

For emergency responders
Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4. Reference to other sections
For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Practice good housekeeping.

7.2. Conditions for safe storage, including any incompatibilities
Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)
Not available.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

### Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>MAK</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³</td>
<td>Respirable fume.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Inhalable fraction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>20 mg/m³</td>
<td>Inhalable fraction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Respirable fume.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Respirable fraction.</td>
<td></td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>MAK</td>
<td>2 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Belgium. Exposure Limit Values.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
</tr>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>STEL</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Regulation/Source</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work</td>
</tr>
<tr>
<td>Croatia</td>
<td>Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>OELs. Government Decree 361</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>Exposure Limit Values</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td>OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>Workplace Exposure Limits</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
### Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>AGW</td>
<td>1,25 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>AGW</td>
<td>0,5 mg/m³, 2 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

### Greece. OELs (Decree No. 90/1999, as amended)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Inhalable</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>0,5 mg/m³, 10 mg/m³</td>
<td>Respirable.</td>
</tr>
</tbody>
</table>

### Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>6 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>STEL</td>
<td>2 mg/m³</td>
<td>Dust.</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>0,5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### Iceland. OELs. Regulation 154/1999 on occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>0,5 mg/m³</td>
<td>Dust.</td>
</tr>
</tbody>
</table>

### Ireland. Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>4 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>10 mg/m³, 2 mg/m³</td>
<td>Total inhalable dust.</td>
</tr>
</tbody>
</table>

### Italy. Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>STEL</td>
<td>6 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>2 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

### Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>6 mg/m³</td>
<td>Decomposition aerosol.</td>
</tr>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>TWA</td>
<td>4 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
### Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

### Norway. Administrative Norms for Contaminants in the Workplace

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TLV</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TLV</td>
<td>0,5 mg/m³</td>
</tr>
</tbody>
</table>

### Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>2,5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>1,2 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

### Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>STEL</td>
<td>6 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>0,5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>STEL</td>
<td>5 mg/m³</td>
<td>Aerosol</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Aerosol</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>0,5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>4 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>1,5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>0,1 mg/m³</td>
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</tbody>
</table>

### Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

### Spain. Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>STEL</td>
<td>6 mg/m³</td>
</tr>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>TWA</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Value</td>
<td>Form</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>5 mg/m³</td>
<td>Total dust.</td>
<td></td>
</tr>
<tr>
<td>2 mg/m³</td>
<td>Respirable dust.</td>
<td></td>
</tr>
</tbody>
</table>

### Switzerland. SUVA Grenzwerte am Arbeitsplatz

<table>
<thead>
<tr>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 mg/m³</td>
<td>Fume and respirable dust.</td>
</tr>
<tr>
<td>3 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td>3 mg/m³</td>
<td>Fume and respirable dust.</td>
</tr>
<tr>
<td>10 mg/m³</td>
<td>Inhalable dust.</td>
</tr>
<tr>
<td>10 mg/m³</td>
<td>Inhalable dust.</td>
</tr>
<tr>
<td>0,5 mg/m³</td>
<td>Inhalable dust.</td>
</tr>
</tbody>
</table>

### UK. EH40 Workplace Exposure Limits (WELs)

<table>
<thead>
<tr>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td>10 mg/m³</td>
<td>Inhalable dust.</td>
</tr>
<tr>
<td>0,5 mg/m³</td>
<td>Inhalable dust.</td>
</tr>
</tbody>
</table>

### Biological limit values


<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium (III) oxide (CAS 1308-38-9)</td>
<td>0,02 mg/g</td>
<td>chromium</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>0,043 µmol/mmol</td>
<td>chromium</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

#### Recommended monitoring procedures

Follow standard monitoring procedures.

#### Derived no effect levels (DNELs)

Not available.

#### Predicted no effect concentrations (PNECs)

Not available.

#### Exposure guidelines

Zirconium silicates (zircon sands) contain trace amounts (106-120 pCi/g) of naturally occurring radioactive uranium and thorium. Overexposure by inhalation to respirable dust containing uranium and thorium may cause lung cancer. Eye contact with the dust may cause eye irritation. Measurements made by Dupont during the use of a similar mineral sand indicated the observance of the 5 mg/m³ OSHA PEL for respirable dust and/or the PEL for quartz ensures the user is below the exposure limits established for uranium and thorium. No LD50 or LC50 can be found for zircon sand.

#### 8.2. Exposure controls

If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

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

- **General information**: Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

- **Eye/face protection**: Wear safety glasses with side shields (or goggles).

- **Skin protection**
  - **Hand protection**: Wear appropriate chemical resistant gloves.
  - **Other**: Wear suitable protective clothing.

- **Respiratory protection**: Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

- **Thermal hazards**: Wear appropriate thermal protective clothing, when necessary.
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

- **Physical state**: Solid.
- **Form**: Powder.
- **Colour**: Not available.
- **Odour**: Not available.
- **Odour threshold**: Not available.
- **pH**: Not available.
- **Melting point/freezing point**: Not available.
- **Initial boiling point and boiling range**: Not available.
- **Flash point**: Not available.
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.

Upper/lower flammability or explosive limits

- **Flammability limit - lower (%)**: Not available.
- **Flammability limit - upper (%)**: Not available.
- **Vapour pressure**: Not available.
- **Vapour density**: Not available.
- **Relative density**: Not available.
- **Solubility(ies)**
  - **Solubility (water)**: Not available.
  - **Solubility (other)**: Not available.
- **Partition coefficient (n-octanol/water)**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.
- **Explosive properties**: Not explosive.
- **Oxidising properties**: Not oxidising.

9.2. Other information

- **54.8. Other information**: No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Material is stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Contact with incompatible materials.

10.5. Incompatible materials

- **Strong oxidising agents.**
- **Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure.**

10.6. Hazardous decomposition products

No hazardous decomposition products are known.
SECTION 11: Toxicological information

-general information
Occupational exposure to the substance or mixture may cause adverse effects.

-information on likely routes of exposure

-Inhalation
Dust may irritate respiratory system.

-Skin contact
Dust or powder may irritate the skin.

-Eye contact
Dust may irritate the eyes.

-Ingestion
May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

-symptoms
Dusts may irritate the respiratory tract, skin and eyes.

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>&gt; 0,002 mg/l, 4 Hours</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

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

-Serious eye damage/eye 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.

-Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)
Not listed.

-Reproductive toxicity
Due to partial or complete lack of data the classification is not possible.

-Specific target organ toxicity
- single exposure
Based on available data, the classification criteria are not met.

-Specific target organ toxicity
- repeated exposure
Based on available data, the classification criteria are not met.

-Aspiration hazard
Due to partial or complete lack of data the classification is not possible.

-Mixture versus substance information
No information available.

-Other information
Not available.

SECTION 12: Ecological information

12.1. Toxicity
Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

12.2. Persistence and degradability
No data is available on the degradability of this product.

12.3. Bioaccumulative potential
No data available.

-Partition coefficient
-n-octanol/water (log Kow)
Not available.

-Bioconcentration factor (BCF)
Not available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
Not available.

12.6. Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Residual waste
As sold, this product is not RCRA hazardous. Final used condition must be evaluated prior to disposal. Dispose of waste product in accordance with Federal, State and Local regulations. The chrome compounds (Cr III) in this product may be altered to a hexavalent compound (Cr VI) under certain use conditions, such as exposure to alkali salts and/or high temperatures. Proper waste testing (such as TCLP) must be done to determine the waste status of used product. Reuse and recycling of chrome Refractories is recommended whenever possible.

Contaminated packaging
Not available.

EU waste code
Not available.

SECTION 14: Transport information

ADR
14.1. - 14.6.: Not regulated as dangerous goods.

RID
14.1. - 14.6.: Not regulated as dangerous goods.

ADN
14.1. - 14.6.: Not regulated as dangerous goods.

IATA
14.1. - 14.6.: Not regulated as dangerous goods.

IMDG
14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

EU regulations
- Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I
  Not listed.
- Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II
  Not listed.
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
  Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry
  Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
  Boric acid (CAS 10043-35-3)

Authorisations
- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
  Not listed.

Restrictions on use
- Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use
  Not regulated.
- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
  Boric acid (CAS 10043-35-3)
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work
  Not listed.
Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended
Not listed.

Other regulations
The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations
Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out.

SECTION 16: Other information
List of abbreviations
Not available.

References
Not available.

Information on evaluation method leading to the classification of mixture
Not available.

Full text of any H-statements not written out in full under Sections 2 to 15
None.

Revision information
Composition / Information on Ingredients: Ingredients
Toxicological Information: Toxicological Data
Ecological Information: Ecotoxicity
GHS: Classification

Training information
Not available.

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