SECTION 1: Identification

1.1. Identification
Product form: Mixture
Product name: Vibrocast 2800
CAS-No.: Mixture
Product code: 0382
Other means of identification: Alumina-Silicate Cement Bonded Castable

1.2. Recommended use and restrictions on use
Use of the substance/mixture: Refractory
Recommended use: Industrial use

1.3. Supplier
Resco Products, Inc.
One Robinson Plaza, Suite 300
6600 Steubenville Pike
Pittsburgh, PA 15205 - United States
412-494-4491
SDS@RescoProducts.com - WWW.RescoProducts.com

1.4. Emergency telephone number
Emergency number: EMERGENCY ONLY (CHEMTREC) USA & Canada 1-800-424-9300
Outside USA & Canada +1 703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
- Skin corrosion/irritation Category 2: H315 - Causes skin irritation
- Serious eye damage/eye irritation Category 2B: H320 - Causes eye irritation
- Carcinogenicity Category 1A: H350 - May cause cancer (Inhalation)

Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling
- Hazard pictograms (GHS US):
  ![Hazard pictogram 1]
  ![Hazard pictogram 2]
- Signal word (GHS US): Danger
- Hazard statements (GHS US):
  - H315 - Causes skin irritation
  - H320 - Causes eye irritation
  - H350 - May cause cancer (Inhalation)
- Precautionary statements (GHS US):
  - P280 - Wear eye protection, Dust respirator, protective gloves.
  - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P332+P313 - If skin irritation occurs: Get medical advice/attention.
  - P337+P313 - If eye irritation persists: Get medical advice/attention.
  - P260 - Do not breathe dust.

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>quartz 14808-60-7</td>
<td>10 – 20</td>
<td></td>
<td>Carc. 1A, H350</td>
</tr>
<tr>
<td>cristobalite 14464-46-1</td>
<td>10 – 20</td>
<td></td>
<td>Carc. 1A, H350</td>
</tr>
<tr>
<td>Calcium Aluminate Cement</td>
<td>85997-16-2</td>
<td>5 – 10</td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2B, H320</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures
First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
**Vibrocast 2800**

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

---

**First-aid measures after eye contact**: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**First-aid measures after ingestion**: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

**4.2. Most important symptoms and effects (acute and delayed)**

**Potential Adverse human health effects and symptoms**

- Symptoms/effects after inhalation: May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation.
- Symptoms/effects after skin contact: Causes skin irritation.
- Symptoms/effects after eye contact: Causes eye irritation.

**4.3. Immediate medical attention and special treatment, if necessary**

No additional information available

---

**SECTION 5: Fire-fighting measures**

**5.1. Suitable (and unsuitable) extinguishing media**

- Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media: In case of fire, all extinguishing media allowed.

**5.2. Specific hazards arising from the chemical**

- Fire hazard: Not flammable.

**5.3. Special protective equipment and precautions for fire-fighters**

- Firefighting instructions: Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

---

**SECTION 6: Accidental release measures**

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

**6.1.1. For non-emergency personnel**

- Emergency procedures: Do not breathe dust.

**6.1.2. For emergency responders**

- Protective equipment: Equip cleanup crew with proper protection.
- Emergency procedures: Ventilate area.

**6.2. Environmental precautions**

Prevent entry to sewers and public waters.

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

Methods for cleaning up: On land, sweep or shovel into suitable containers. Minimize generation of dust.

**6.4. Reference to other sections**

See Heading 8. Exposure controls and personal protection.

---

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

- Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Avoid raising dust. Avoid contact with skin and eyes. Do not breathe dust.
- Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

**7.2. Conditions for safe storage, including any incompatibilities**

- Storage conditions: Store this product in a dry location where it can be protected from the elements.

---

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

**8.1. Control parameters**

**Vibrocast 2800 (Mixture)**

No additional information available

**Calcium Aluminate Cement (65997-16-2)**

No additional information available

**cristobalite (14464-46-1)**

**USA - ACGIH - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>ACGIH TWA (mg/m³)</th>
<th>0.025 mg/m³ respirable dust</th>
</tr>
</thead>
</table>

**USA - OSHA - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>0.05 mg/m³ respirable dust</th>
</tr>
</thead>
</table>

**quartz (14808-60-7)**

**USA - ACGIH - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>ACGIH TWA (mg/m³)</th>
<th>0.025 mg/m³ (Silica-Crystalline Quartz; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)</th>
</tr>
</thead>
</table>

**USA - OSHA - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>Local name</th>
<th>Silica, crystalline quartz, respirable dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>0.05 mg/m³ respirable dust</td>
</tr>
<tr>
<td>Remark (OSHA)</td>
<td>(3) See Table Z-3.</td>
</tr>
</tbody>
</table>

---

8/31/2021 EN (English US)
8.2. Appropriate engineering controls

Appropriate engineering controls: Provide adequate ventilation to minimize dust concentrations.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Granular mixture.</td>
</tr>
<tr>
<td>Color</td>
<td>Gray</td>
</tr>
<tr>
<td>Odor</td>
<td>earthy</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt; 2500 °F</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (ether=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure at 50 °C</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>≈ 2.2</td>
</tr>
<tr>
<td>Solubility</td>
<td>Slightly soluble.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Hydraulic setting.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Avoid dust formation.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available
SECTION 11: Toxicological information

11.1 Information on toxicological effects

- **Acute toxicity (oral):** Not classified
- **Acute toxicity (dermal):** Not classified
- **Acute toxicity (inhalation):** Not classified
- **Skin corrosion/irritation:** Causes skin irritation.
- **Serious eye damage/irritation:** Causes eye irritation.
- **Respiratory or skin sensitization:** Not classified
- **Germ cell mutagenicity:** Not classified
- **Carcinogenicity:** May cause cancer (Inhalation).

<table>
<thead>
<tr>
<th>quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
</tr>
<tr>
<td>STOT-single exposure</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
</tr>
<tr>
<td>Aspiration hazard</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
</tr>
<tr>
<td>Potential Adverse human health effects and symptoms</td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1 Toxicity

No additional information available

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Vibrocast 2800 (Mixture)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>cristobalite (14464-46-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td>ThOD</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td>ThOD</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Vibrocast 2800 (Mixture)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>cristobalite (14464-46-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

<table>
<thead>
<tr>
<th>cristobalite (14464-46-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - soil</td>
</tr>
</tbody>
</table>

12.5 Other adverse effects

- **Effect on the global warming:** None known
- **Other information:** No other effects known.

SECTION 13: Disposal considerations

13.1 Disposal methods

- **Product/Packaging disposal recommendations:** Dispose in a safe manner in accordance with local/national regulations.
- **Ecology - waste materials:** Avoid release to the environment.
SECTION 14: Transport information
Department of Transportation (DOT)
In accordance with DOT
Not regulated
Transportation of Dangerous Goods
Not regulated
Transport by sea
Not regulated
Air transport
Not regulated

SECTION 15: Regulatory information
15.1. US Federal regulations
Vibrocast 2800 (Mixture)
All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations
CANADA
Calcium Aluminate Cement (65997-16-2)
Listed on the Canadian DSL (Domestic Substances List)
cristobalite (14464-46-1)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available
National regulations
quartz (14808-60-7)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations
Vibrocast 2800 (Mixture)
U.S. - California - Proposition 65 - Other information
This product contains crystalline silica, a chemical known to the state of California to cause cancer. For more information go to WWW.P65Warnings.ca.gov
cristobalite (14464-46-1)
U.S. - California - Proposition 65 - Developmental Toxicity
U.S. - California - Proposition 65 - Reproductive Toxicity - Female
U.S. - California - Proposition 65 - Reproductive Toxicity - Male
No significant risk level (NSRL)
Maximum allowable dose level (MADL)
Yes No No No
quartz (14808-60-7)
U.S. - California - Proposition 65 - Developmental Toxicity
U.S. - California - Proposition 65 - Reproductive Toxicity - Female
U.S. - California - Proposition 65 - Reproductive Toxicity - Male
No significant risk level (NSRL)
Maximum allowable dose level (MADL)
Yes No No No

Component State or local regulations
Cristobalite (14464-46-1) U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Quartz (14808-60-7) U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 08/31/2021
Other information : Report language name. English. In the event of any conflict between English and other language versions, the English version shall prevail.

Full text of H-phrases:
H315 Causes skin irritation
H320 Causes eye irritation
H350 May cause cancer

SDS US (GHS HazCom 2012)
This information and recommendations set forth herein are taken from sources believed to be accurate as of the date herein, however, Resco Products, Inc. makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.