**SECTION 1: Identification**

1. **Identification**
   - **Product form**: Mixture
   - **Product name**: Unicrete 50 Flowz
   - **CAS-No.**: Mixture
   - **Product code**: 3132
   - **Other means of identification**: Alumina-Silicate Cement Bonded Castable

2. **Recommended use and restrictions on use**
   - **Use of the substance/mixture**: Refractory
   - **Recommended use**: Industrial use

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

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

3. **GHS Label elements, including precautionary statements**
   - **Hazard pictograms (GHS US)**
   - **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.

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

3. **Substances**
   - Not applicable

4. **Mixtures**
   - **Name** | **Product identifier** | **%** | **GHS US classification**
   - cristobalite | (CAS-No.) 14464-46-1 | 10 – 20 | Carc. 1A, H350
   - aluminum oxide, non-fibrous | (CAS-No.) 1344-28-1 | 10 – 20 | Not classified
   - Calcium Aluminate Cement | (CAS-No.) 65997-16-2 | 1 – 5 | Skin Irrit. 2, H315
   - | | | Eye Irrit. 2B, H320
   - quartz | (CAS-No.) 14808-60-7 | 1 – 5 | Carc. 1A, H350

**SECTION 4: First-aid measures**

4. **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.
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: Based on available data, the classification criteria are not met.
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 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.

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.
Incompatible products: Strong bases. Strong acids.

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

Unicrete 50 Flowz (Mixture)
No additional information available

Calcium Aluminate Cement (65997-16-2)
No additional information available
cristobalite (14464-46-1)

USA - ACGIH - Occupational Exposure Limits
ACGIH TWA (mg/m³) 0.025 mg/m³ respirable dust

USA - OSHA - Occupational Exposure Limits
OSHA PEL (TWA) (mg/m³) 0.05 mg/m³ respirable dust

aluminium oxide, non-fibrous (1344-28-1)

USA - ACGIH - Occupational Exposure Limits
ACGIH TWA (mg/m³) 1 mg/m³ respirable dust

quartz (14808-60-7)

USA - ACGIH - Occupational Exposure Limits
ACGIH TWA (mg/m³) 0.025 mg/m³ (Silica-Crystalline Quartz; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)
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>None</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; 3000 °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>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>No data available</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>≈ 2.4</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>No data available</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

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LC50 Inhalation - Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>&gt; 15900 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)</td>
<td>7.6 mg/l air (Equivalent or similar to OECD 403, 1 h, Rat, Male, Experimental value, Inhalation (aerosol))</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Skin corrosion/irritation</th>
<th>Serious eye damage/irritation</th>
<th>Respiratory or skin sensitization</th>
<th>Germ cell mutagenicity</th>
<th>Carcinogenicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>quartz (14808-60-7)</td>
<td>Causes skin irritation.</td>
<td>Causes eye irritation.</td>
<td>Not classified</td>
<td>Not classified</td>
<td>May cause cancer (Inhalation).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Reproductive toxicity</th>
<th>STOT-single exposure</th>
<th>STOT-repeated exposure</th>
<th>Aspiration hazard</th>
<th>Viscosity, kinematic</th>
<th>Potential Adverse human health effects and symptoms</th>
<th>Symptoms/effects after inhalation</th>
<th>Symptoms/effects after skin contact</th>
<th>Symptoms/effects after eye contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>Not classified</td>
<td>Not classified</td>
<td>Not classified</td>
<td>Not classified</td>
<td>Not data available</td>
<td>Based on available data, the classification criteria are not met.</td>
<td>May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation.</td>
<td>Causes skin irritation.</td>
<td>Causes eye irritation.</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### 12.1. Toxicity
No additional information available

#### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
<th>Chemical oxygen demand (COD)</th>
<th>ThOD</th>
<th>BOD (% of ThOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unicrete 50 Flowz (Mixture)</td>
<td>Not established.</td>
<td>Not applicable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cristobalite (14464-46-1)</td>
<td>Mineral. Not applicable.</td>
<td>Not applicable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>quartz (14808-60-7)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
<th>Chemical oxygen demand (COD)</th>
<th>ThOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>cristobalite (14464-46-1)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td></td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unicrete 50 Flowz (Mixture)</td>
<td>Not established.</td>
</tr>
<tr>
<td>cristobalite (14464-46-1)</td>
<td>No data available.</td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>No data available.</td>
</tr>
</tbody>
</table>
### Unicrete 50 Flowz

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

<table>
<thead>
<tr>
<th><strong>quartz (14808-60-7)</strong></th>
<th>Bioaccumulative potential</th>
<th>No data available.</th>
</tr>
</thead>
</table>

**12.4. Mobility in soil**

<table>
<thead>
<tr>
<th><strong>cristobalite (14464-46-1)</strong></th>
<th>Ecology - soil</th>
<th>No data available.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>aluminium oxide, non-fibrous (1344-28-1)</strong></th>
<th>Ecology - soil</th>
<th>No data available.</th>
</tr>
</thead>
</table>

**12.5. Other adverse effects**

Effect on the global warming | None 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**

- **Unicrete 50 Flowz (Mixture)**
  - All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory
  - **aluminium oxide, non-fibrous (1344-28-1)**
    - Not subject to reporting requirements of the United States SARA Section 313
    - **Note**: The section 313 chemical list contains "CAS # 1344-28-1 Aluminum Oxide (Fibrous forms)"; the Aluminum oxide contained in this product is non-fibrous, and thus is not a section 313 material. Only manufacturing, processing, or otherwise use of aluminum oxide in the fibrous form triggers reporting.

**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)
- aluminium oxide, non-fibrous (1344-28-1)
  - 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**

- **Unicrete 50 Flowz (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

<table>
<thead>
<tr>
<th><strong>cristobalite (14464-46-1)</strong></th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**11/22/2021**

EN (English US)
## Unicrete 50 Flowz
### Safety Data Sheet

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### Component

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cristobalite (14464-46-1)</td>
<td>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</td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>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</td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
</tbody>
</table>

### SECTION 16: Other information

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

Revision date: 11/22/2021

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:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H320</td>
<td>Causes eye irritation</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
</tbody>
</table>

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.