SECTION 1: Identification

1.1. Identification
Product form: Mixture
Product name: R-Max PC
CAS-No.: Mixture
Product code: 1525
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): !

Signal word (GHS US): Danger
Hazard statements (GHS US): H315 - Causes skin irritation
H320 - Causes eye irritation
H350 - May cause cancer (Inhalation)

P395+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>aluminum oxide, non-fibrous</td>
<td>[CAS-No.] 1344-28-1</td>
<td>50 – 75</td>
<td>Not classified</td>
</tr>
<tr>
<td>Calcium Aluminate Cement</td>
<td>[CAS-No.] 65997-16-2</td>
<td>5 – 10</td>
<td>Skin Irr. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irr. 2B, H320</td>
</tr>
<tr>
<td>quartz</td>
<td>[CAS-No.] 14808-60-7</td>
<td>1 – 5</td>
<td>Carc. 1A, H350</td>
</tr>
<tr>
<td>cristobalite</td>
<td>[CAS-No.] 14464-46-1</td>
<td>0.1 – 0.5</td>
<td>Carc. 1A, H350</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.
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 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.
Incompatible products: Strong bases. Strong acids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Aluminate Cement</td>
<td>0.025 mg/m³ respirable dust</td>
<td>0.05 mg/m³ respirable dust</td>
</tr>
<tr>
<td>cristobalite (14464-46-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA - ACGIH - Occupational Exposure Limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA - ACGIH - Occupational Exposure Limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA - ACGIH - Occupational Exposure Limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA - ACGIH - Occupational Exposure Limits</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
R-Max PC
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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>

8.2. 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

Physical state: Solid
Appearance: Granular mixture.
Color: Light gray
Odor: Earthy
Odor threshold: Not applicable
pH: No data available
Melting point: > 2000 °F
Freezing point: Not applicable
Boiling point: Not applicable
Critical temperature: Not applicable
Flash point: Not applicable
Relative evaporation rate (butyl acetate=1): Not applicable
Relative evaporation rate (ether=1): Not applicable
Flammability (solid, gas): Non flammable.
Vapor pressure: No data available
Vapor pressure at 50 °C: Not Applicable
Relative vapor density at 20 °C: No data available
Relative density: ≈ 2.6
Solubility: Slightly soluble.
Partition coefficient n-octanol/water (Log Pow): No data available
Auto-ignition temperature: Not applicable
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosion limits: Not applicable
Explosive properties: No data available
Oxidizing properties: No data available

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>Parameter</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>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 15900 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)</td>
</tr>
<tr>
<td>LC50 Inhalation - Rat</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>

- 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).

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>1 - Carcinogenic to humans</td>
</tr>
</tbody>
</table>

- Reproductive toxicity: Not classified
- STOT-single exposure: Not classified
- STOT-repeated exposure: Not classified
- Aspiration hazard: Not classified
- Viscosity, kinematic: No data available
- 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.

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

**R-Max PC (Mixture)**

- Persistence and degradability: Not established.

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

- Persistence and degradability: Mineral. Not applicable.
- Chemical oxygen demand (COD): Not applicable
- ThOD: Not applicable
- BOD (% of ThOD): Not applicable

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

- Persistence and degradability: Not applicable.
- Chemical oxygen demand (COD): Not applicable
- ThOD: Not applicable

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

- Persistence and degradability: Not applicable.
- Biochemical oxygen demand (BOD): Not applicable
- Chemical oxygen demand (COD): Not applicable
- ThOD: Not applicable

#### 12.3. Bioaccumulative potential

**R-Max PC (Mixture)**

- Bioaccumulative potential: Not established.

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

- Bioaccumulative potential: No data available.

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

- Bioaccumulative potential: No data available.
**R-Max PC**  
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

### 12.4. Mobility in soil

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

<table>
<thead>
<tr>
<th>Aluminium oxide, non-fibrous (1344-28-1)</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

**R-Max PC (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**: 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

**R-Max PC (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** | **No** | **No**
**R-Max PC**

**Safety Data Sheet**

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

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<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>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>Quartz (14808-60-7)</td>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
</tbody>
</table>

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**SECTION 16: Other Information**

- Revision date: 10/04/2021
- 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

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**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.