SECTION 1: Identification

1.1. Identification
Product form: Mixture
Product name: Quikturn 60SF
CAS-No.: Mixture
Product code: 1521
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
Signal word (GHS US): Danger
Hazard pictograms (GHS US): 

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.
- P260 - Do not breathe dust.
- P332+P313 - If skin irritation occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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>10 – 20</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, 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.

Potential Adverse 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.

Immediate medical attention and special treatment, if necessary:
No additional information available.

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

Fire hazard: Not flammable.

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

Prevent entry to sewers and public waters.
On land, sweep or shovel into suitable containers. Minimize generation of dust.

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.

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Strong bases. Strong acids.

Quikturn 60SF (Mixture)
Calcium Aluminate Cement (65997-16-2)
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
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; 2000 °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**

| Acute toxicity (oral)               | Not classified |
| Acute toxicity (dermal)             | Not classified |
| Acute toxicity (inhalation)         | Not classified |

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

| LD50 oral rat                      | > 15900 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral) |
| LC50 Inhalation - Rat              | 7.6 mg/l air (Equivalent or similar to OECD 403, 1 h, Rat, Male, Experimental value, Inhalation (aerosol)) |

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

| IARC group                          | 1 - Carcinogenic to humans |

 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**

**Quikturn 60SF (Mixture)**

| Quikturn 60SF (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**

**Quikturn 60SF (Mixture)**

| Bioaccumulative potential | Not established. |
### 12.4 Mobility in soil

<table>
<thead>
<tr>
<th>Component</th>
<th>Bioaccumulative potential</th>
<th>Ecology - soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>cristobalite (14464-46-1)</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>quartz (14808-60-7)</td>
<td>No data available.</td>
<td></td>
</tr>
</tbody>
</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)

- Not regulated

#### Transportation of Dangerous Goods

- Not regulated
  - Transport by sea
  - Air transport

### SECTION 15: Regulatory information

#### 15.1 US Federal regulations

- **Quikturn 60SF (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.
  - **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

- **Quikturn 60SF (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)

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.-California - Proposition 65 - Carcinogens List</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>U.S.-California - Proposition 65 - Developmental Toxicity</td>
<td></td>
</tr>
<tr>
<td>U.S.-California - Proposition 65 - Reproductive Toxicity - Female</td>
<td></td>
</tr>
<tr>
<td>U.S.-California - Proposition 65 - Reproductive Toxicity - Male</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum allowable dose level (MADL)</th>
<th>No significant risk level (NSRL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

## quartz (14808-60-7)

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.-California - Proposition 65 - Carcinogens List</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>U.S.-California - Proposition 65 - Developmental Toxicity</td>
<td></td>
</tr>
<tr>
<td>U.S.-California - Proposition 65 - Reproductive Toxicity - Female</td>
<td></td>
</tr>
<tr>
<td>U.S.-California - Proposition 65 - Reproductive Toxicity - Male</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum allowable dose level (MADL)</th>
<th>No significant risk level (NSRL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

## SECTION 16: 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.