SECTION 1: Identification

1.1. Identification
Product form: Mixture
Product name: QuikLite 3A-DS
CAS-No.: Mixture
Product code: 1696
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.
Penn Center West
Building 2, Suite 430
Pittsburgh, PA 15276 - United States
412-494-4491
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- and EUH-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)

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
Other hazards not contributing to the classification: This product contains a dust suppression admixture, that may give off smoke or fumes during initial heat up. These fumes include carbon monoxide, carbon dioxide, and hydrocarbons. Adequate ventilation and appropriate respiratory protection may be required.

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>Calcium Aluminate Cement</td>
<td>(CAS-No.) 65997-16-2</td>
<td>20 – 50</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td>quartz</td>
<td>(CAS-No.) 14808-60-7</td>
<td>10 – 20</td>
<td>Carc. 1A, H350</td>
</tr>
<tr>
<td>cristobalite</td>
<td>(CAS-No.) 14464-46-1</td>
<td>5 – 10</td>
<td>Carc. 1A, H350</td>
</tr>
</tbody>
</table>

Full text of hazard classes, H- and EUH-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).
Exposure controls/personal protection

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.
Explosion hazard: None.
Hazardous decomposition products in case of fire: This product contains a dust suppression admixture, that may give off smoke or fumes during initial heat up. These fumes include carbon monoxide, carbon dioxide, and hydrocarbons. Adequate ventilation and appropriate respiratory protection may be required.

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. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: “Exposure controls/personal protection”. Emergency procedures: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods for containment and cleaning up

Methods for cleaning up: Mechanically recover the product. On land, sweep or shovel into suitable containers. Minimize generation of dust.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. 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. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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.
Incompatible materials: Strong acids, bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

QuikLite 3A-DS (Mixture)
No additional information available

Calcium Aluminate Cement (65997-16-2)
No additional information available
### 8.2. Appropriate engineering controls

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

#### 8.3. Individual protection measures/Personal protective equipment

- **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>brown</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>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>≈ 0.9</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
None.

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>
</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:
  - 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
Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>QuikLite 3A-DS (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>
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<td>Biochemical oxygen demand (BOD)</td>
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<tr>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td>ThOD</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>QuikLite 3A-DS (Mixture)</th>
</tr>
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<tbody>
<tr>
<td>Bioaccumulative potential</td>
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<td>Bioaccumulative potential</td>
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</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>
12.4. Mobility in soil

cristobalite (14464-46-1)

Ecology - soil

No data available.

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

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

QuikLite 3A-DS (Mixture)

All components of this product are listed, 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

QuikLite 3A-DS (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>Component</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cristobalite (14464-46-1)</td>
<td>Maximum allowable dose level (MADL)</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
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<tbody>
<tr>
<td>Quartz (14808-60-7)</td>
<td>Maximum allowable dose level (MADL)</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Component

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
Full text of H-phrases:

<table>
<thead>
<tr>
<th>H315</th>
<th>Causes skin irritation</th>
</tr>
</thead>
<tbody>
<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)

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