## 1 Identification

- **Product identifier**
- **Trade name:** Elephant Armor Ultra-High Performance Mortar
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - GST International, Inc.
    - 855 E Greg St., Ste 103
    - Sparks, NV 89431
    - 775-829-2626
  - **Emergency telephone number:** Infotrac: 1-800-535-5053, 1-352-326-2510

## 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Health hazard
    - May cause cancer.
  - Skin irritation
    - Causes skin irritation.
    - May cause respiratory irritation.
    - Causes eye irritation.

- **Label elements**
  - **GHS label elements**
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS07
    - GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - Silica
  - Quartz (SiO2)

- **Hazard statements**
  - Causes skin and eye irritation.
  - May cause cancer.
  - May cause respiratory irritation.

- **Precautionary statements**
  - Avoid breathing dust/fume/gas/mist/vapors/spray.
  - Use only outdoors or in a well-ventilated area.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Use personal protective equipment as required.
  - Wash thoroughly after handling.

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Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Take off contaminated clothing and wash before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Call a POISON CENTER/doctor if you feel unwell.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

1 0 0
Health = 1
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *1
Fire = 0
Reactivity = 0

Composition/information on ingredients

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1317-95-9</td>
<td>Silica</td>
<td>25-50%</td>
</tr>
<tr>
<td></td>
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<td></td>
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<td>Aluminosilicate Glass</td>
<td>25-50%</td>
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<td></td>
</tr>
<tr>
<td>960375-09-1</td>
<td>Calcium Sulfoaluminate Cement</td>
<td>25-50%</td>
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<tr>
<td>65997-15-1</td>
<td>Cement, portland, chemicals</td>
<td>5-10%</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>Quartz (SiO2)</td>
<td>≤ 2.5%</td>
</tr>
<tr>
<td></td>
<td>Carc. 1A, H350; STOT RE 1, H372; Acute Tox. 4, H332; STOT SE 3, H335; Eye Irrit. 2B, H320</td>
<td></td>
</tr>
</tbody>
</table>

First-aid measures

Description of first aid measures

After inhalation: In case of unconsciousness, place patient securely on side position for transportation.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: Give large amounts of water. If symptoms persist consult doctor.
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· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:**
    - CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.

- **Methods and material for containment and cleaning up:** Ensure adequate ventilation.

- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

### 7 Handling and storage

- **Precautions for safe handling** No special precautions are necessary if used correctly.

- **Information about protection against explosions and fires** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** Keep receptacle tightly sealed.

- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems** No further data; see section 7.

- **Control parameters**

  - **Components with occupational exposure limits:**

    |  |  |
    |-----------------|-----------------|
    | 1317-95-9 Silica |  |
    | PEL | see Quartz listing |
    | REL | Long-term value: 0.05* mg/m³ |
    |     | *respirable dust; See Pocket Guide App. A |
    | TLV | TLV withdrawn |

    | 65997-15-1 Cement, portland, chemicals |  |
    | PEL | Long-term value: 50 mppcf or 15* 5** mg/m³ |
    |     | *total dust **respirable fraction |
    | REL | Long-term value: 10* 5** mg/m³ |
    |     | *total dust **respirable fraction |

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TLV Long-term value: 1* mg/m³
E; *as respirable fraction

14808-60-7 Quartz (SiO₂)

PEL see Quartz listing
REL Long-term value: 0.05* mg/m³
*respirable dust; See Pocket Guide App. A
TLV Long-term value: 0.025* mg/m³
*as respirable fraction

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    Keep away from foodstuffs, beverages and feed.
    Immediately remove all soiled and contaminated clothing.
    Wash hands before breaks and at the end of work.
    Avoid contact with the eyes and skin.
  - Breathing equipment: Not required.
  - Protection of hands:
    Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Select glove material based on penetration times, rates of diffusion and degradation.

- Material of gloves
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Penetration time of glove material
  The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

- Eye protection: Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Granulate
  - Color: See product specification
  - Odor: Mild
  - Odor threshold: Not determined.
  - pH-value: Not applicable.

- Change in condition
  Melting point/Melting range: >999 °C (>1830 °F)
**Boiling point/Boiling range:** 999 °C (1830 °F)
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapour density:** Not applicable.
- **Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.
- **Solvent content:**
  - **Organic solvents:** 0.0 %
  - **Water:** 0.2 %
  - **Solids content:** 100.0 %
- **Other information** No further relevant information available.

**10 Stability and reactivity**
- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information**
- **Information on toxicological effects**
- **Acute toxicity:**
  - **Primary irritant effect:**
    - **on the skin:** Irritant to skin and mucous membranes.
    - **on the eye:** Irritating effect.
  - **Sensitization:** No sensitizing effects known.
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· Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Irritant

· Carcinogenic categories

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1317-95-9 Silica</td>
<td>1</td>
</tr>
<tr>
<td>9002-89-5 Poly(vinyl alcohol)</td>
<td>3</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1317-95-9 Silica</td>
<td>K</td>
</tr>
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<td>K</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

*12 Ecological information

· Toxicity
  · Aquatic toxicity: No further relevant information available.
  · Persistence and degradability No further relevant information available.
  · Bioaccumulative potential No further relevant information available.
  · Mobility in soil No further relevant information available.

· Additional ecological information:
  · General notes:
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  · Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.
  · Other adverse effects No further relevant information available.

*13 Disposal considerations

· Waste treatment methods
  · Recommendation:
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:
  · Recommendation: Disposal must be made according to official regulations.

*14 Transport information

· UN-Number
  · DOT, ADR, ADN, IATA Non-Regulated Material
  · IMDG Non-Regulated Material
  · Not Regulated

· UN proper shipping name
  · Not Regulated for Transportation

· DOT, ADR, ADN, IMDG, IATA Non-Regulated Material

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38.1.1 Transport hazard class(es)

· DOT, ADR, ADN, IMDG, IATA
  · Class Non-Regulated Material

38.2 Packing group

· DOT, ADR, IMDG, IATA Non-Regulated Material

38.3 Environmental hazards:

· Marine pollutant: No

· Special precautions for user Not applicable.

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· UN "Model Regulation": -

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

  · Sara

  · Section 355 (extremely hazardous substances): None of the ingredients is listed.

  · Section 313 (Specific toxic chemical listings): None of the ingredients is listed.

  · TSCA (Toxic Substances Control Act):
    65997-15-1 Cement, portland, chemicals
    7439-89-6 iron
    9002-89-5 Poly(vinyl alcohol)
    14808-60-7 Quartz (SiO2)
    36290-04-7 Sodium salt of poly-naphthalene sulfonic acid
    64741-89-5 Distillates (petroleum), solvent-refined light paraffinic
    64741-88-4 Distillates (petroleum), solvent-refined heavy paraffinic
    7757-82-6 sodium sulphate
    7732-18-5 water, distilled, conductivity or of similar purity

  · Proposition 65

    · Chemicals known to cause cancer: 14808-60-7 Quartz (SiO2)

    · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.

    · Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.

    · Chemicals known to cause developmental toxicity: None of the ingredients is listed.

  · Carcinogenic categories

    · EPA (Environmental Protection Agency) None of the ingredients is listed.

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· **TLV (Threshold Limit Value established by ACGIH)**
  1317-95-9 Silica A2
  14808-60-7 Quartz (SiO2) A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  1317-95-9 Silica
  14808-60-7 Quartz (SiO2)

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**
  GHS07  GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
  Silica
  Quartz (SiO2)

· **Hazard statements**
  Causes skin and eye irritation.
  May cause cancer.
  May cause respiratory irritation.

· **Precautionary statements**
  Avoid breathing dust/fume/gas/mist/vapors/spray.
  Use only outdoors or in a well-ventilated area.
  Wear protective gloves/protective clothing/eye protection/face protection.
  Use personal protective equipment as required.
  Wash thoroughly after handling.
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Specific treatment (see on this label).
  Take off contaminated clothing and wash before reuse.
  IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  IF exposed or concerned: Get medical advice/attention.
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  IF ON SKIN: Wash with plenty of water.
  Call a POISON CENTER/doctor if you feel unwell.
  Store locked up.
  Store in a well-ventilated place. Keep container tightly closed.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**
The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

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State Right to Know

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<td></td>
<td>9002-89-5</td>
<td>Poly(vinyl alcohol)</td>
<td>≤ 2.5%</td>
</tr>
</tbody>
</table>

All ingredients are listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation / last revision 05/21/2014 / 7

Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B
- Carc. 1A: Carcinogenicity, Hazard Category 1A
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

* Data compared to the previous version altered.

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