SECTION 1: Identification

1.1. Identification

Product form: Mixture
Product name: Patriot HF
CAS-No.: 7197
Product code:
Other means of identification: Alumina-Silicate Brick

1.2. Recommended use and restrictions on use

Use of the substance/mixture: Refractory Brick
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
Carcinogenicity Category 1A H350 May cause cancer (Inhalation, Dust when sawing or tear out)
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335 May cause respiratory irritation

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):
H350 - May cause cancer (Inhalation, Dust when sawing or tear out)
May dry/chap skin.
Dust from sawing or tear out may irritate eye.
P260 - Do not breathe dust.
P280 - Wear Safety shoes, protective gloves, eye protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary statements (GHS US):
P360 - In case of accident or if you feel unwell, seek medical advice immediately (show your label where applicable).

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>aluminium oxide, non-fibrous</td>
<td>(CAS-No.) 1344-28-1</td>
<td>10 – 20</td>
<td>Not classified</td>
</tr>
<tr>
<td>cristobalite</td>
<td>(CAS-No.) 14464-46-1</td>
<td>10 – 20</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.
First-aid measures after inhalation: Allow affected person to breathe fresh air.
First-aid measures after skin contact: Gently wash with plenty of soap and water.
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.
4.2. Most important symptoms and effects (acute and delayed)
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: Slight irritation.
Symptoms/effects after eye contact: Dust from sawing or tear out may irritate eye.
Symptoms/effects after ingestion: No data available.

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: Non-flammable.

5.3. Special protective equipment and precautions for fire-fighters
Firefighting instructions: Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
No additional information available
6.1.2. For emergency responders
Protective equipment: Use personal protective equipment as required.

6.2. Environmental precautions
No additional information available

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Collect spillage.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Wear Safety shoes, Gloves.
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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Patriot HF (Mixture)
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

8.2. Appropriate engineering controls
Appropriate engineering controls: Provide adequate ventilation to minimize dust concentrations. Dust when sawing or tear out.

8.3. Individual protection measures/Personal protective equipment

Hand protection: protective gloves
Eye protection: Safety glasses
Respiratory protection: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Dust when sawing or tear out

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid
Appearance: Tan Colored Brick Shape.
Color: light brown
Odor: None
Odor threshold: No data available
pH: No data available
Melting point: > 2500 °F
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Relative evaporation rate (butyl acetate=1): No data available
Flammability (solid, gas): Non flammable.
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: ≈ 2.3
Solubility: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosion limits: No data available
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
None known.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
No additional information available

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

<table>
<thead>
<tr>
<th>aluminium oxide, non-fibrous (1344-28-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat : &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 : 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 : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer (Inhalation, Dust when sawing or tear out).
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
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 : Slight irritation.
Symptoms/effects after eye contact : Dust from sawing or tear out may irritate eye.
Symptoms/effects after ingestion : No data available.
**SECTION 12: Ecological information**

**12.1. Toxicity**
No additional information available

**12.2. Persistence and degradability**

<table>
<thead>
<tr>
<th>Compound</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>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

**12.3. Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<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>

**12.4. Mobility in soil**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Ecology - soil</th>
</tr>
</thead>
<tbody>
<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>

**12.5. Other adverse effects**
No additional information available

**SECTION 13: Disposal considerations**

**13.1. Disposal methods**
Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

**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**
**Patriot HF (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

<table>
<thead>
<tr>
<th>Compound</th>
<th>Not subject to reporting requirements of the United States SARA Section 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>Note: The section 313 chemical list contains &quot;CAS # 1344-28-1 Aluminum Oxide (Fibrous forms)&quot;); 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.</td>
</tr>
</tbody>
</table>

**15.2. International regulations**
**CANADA**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Listed on the Canadian DSL (Domestic Substances List)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cristobalite (14464-46-1)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

**EU-Regulations**
No additional information available
### 15.3. US State regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patriot HF (Mixture)</strong></td>
<td>This product contains crystalline silica, a chemical known to the State of California to cause cancer. For more information go to <a href="http://WWW.P65Warnings.ca.gov">WWW.P65Warnings.ca.gov</a></td>
</tr>
<tr>
<td><strong>cristobalite (14464-46-1)</strong></td>
<td></td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
<td></td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>aluminium oxide, non-fibrous (1344-28-1)</strong></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><strong>SECTION 16: Other information</strong></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-phrases:

- **H335**: May cause respiratory 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.