Rescoram 20 CR
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 09/13/2021 Revision date: 09/13/2021 Supersedes: 11/18/2016

SECTION 1: Identification

1.1. Identification
Product form : Mixture
Product name : Rescoram 20 CR
CAS-No. : Mixture
Product code : 0559
Other means of identification : Plastic/Ramming Mix Refractory

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 After drying 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 - After drying 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
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>50 – 75</td>
<td>Not classified</td>
</tr>
<tr>
<td>chromium(III) oxide</td>
<td>(CAS-No.) 1308-38-9</td>
<td>10 – 20</td>
<td>Not classified</td>
</tr>
<tr>
<td>phosphoric acid, conc=75%, aqueous solution</td>
<td>(CAS-No.) 7664-38-2</td>
<td>5 – 10</td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td>quartz</td>
<td>(CAS-No.) 14808-60-7</td>
<td>0.5 – 1</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.

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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: After drying or heating. 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: Avoid contact with skin and eyes.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: On land, sweep or shovel into suitable containers.

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.

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 contact with skin and eyes. After drying 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Rescoram 20 CR (Mixture)
No additional information available
aluminium oxide, non-fibrous (1344-28-1)
USA - ACGIH - Occupational Exposure Limits
ACGIH TWA (mg/m³): 1 mg/m³ respirable dust
phosphoric acid, conc=75%, aqueous solution (7664-38-2)
No additional information available
chromium(III) oxide (1308-38-9)
USA - ACGIH - Occupational Exposure Limits
ACGIH TWA (mg/m³): 0.003 mg/m³ (Inhalable fraction)
quartz (14808-60-7)
USA - ACGIH - Occupational Exposure Limits
ACGIH TWA (mg/m³): 0.025 mg/m³ (Silica-Crystalline Quartz; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)
USA - OSHA - Occupational Exposure Limits
Local name: Silica, crystalline quartz, respirable dust
OSHA PEL (TWA) (mg/m³): 0.05 mg/m³ respirable dust

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Remark (OSHA) (3) See Table Z-3.

8.2. **Appropriate engineering controls**

Appropriate engineering controls: Emergency eye wash fountain with clean water.

8.3. **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, Safety shoes

**Respiratory protection:**
Dust when sawing or tear out. 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>Plastic.</td>
</tr>
<tr>
<td>Color</td>
<td>Green</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; 2500 °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>≈ 2.7</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**

Fire conditions may produce small amounts of hexavalent chromium and other oxidation products. Air Setting.

10.2. **Chemical stability**

Stable under normal conditions of use.

10.3. **Possibility of hazardous reactions**

Not established.

10.4. **Conditions to avoid**

No additional information available

10.5. **Incompatible materials**

No additional information available
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### 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>Substance</th>
<th>LD50 oral</th>
<th>LC50 Inhalation - Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>&gt; 15900 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)</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>

**chromium(III) oxide (1308-38-9):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral</th>
<th>LC50 Inhalation - Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>&gt; 15000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value, Oral)</td>
<td>&gt; 5.41 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, 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:** After drying May cause cancer (Inhalation).

<table>
<thead>
<tr>
<th>Substance</th>
<th>IARC group</th>
</tr>
</thead>
<tbody>
<tr>
<td>quartz (14808-60-7)</td>
<td>1 - Carcinogenic to humans</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### 12.1. Toxicity

**chromium(III) oxide (1308-38-9):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>&gt; 2.9 μg/l (ISO 7346-1, 96 h, Danio rerio, Static system, Fresh water, Experimental value, GLP)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**Rescoram 20 CR (Mixture):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>Biodegradability in soil: not applicable. Biodegradability: not applicable.</td>
</tr>
<tr>
<td>quartz (14808-60-7)</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>Biodegradability in soil: not applicable. Biodegradability: not applicable.</td>
</tr>
<tr>
<td>quartz (14808-60-7)</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Material</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescoram 20 CR (Mixture)</td>
<td>Not established.</td>
</tr>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>No data available.</td>
</tr>
<tr>
<td>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</td>
<td>No test data of component(s) available.</td>
</tr>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>Potential for bioaccumulation (500 ≤ BCF ≤ 5000).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>BCF fish 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>260 – 800 (Lepomis macrochirus, Fresh water, Read-across, Fresh weight)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>quartz (14808-60-7)</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

### Mobility in soil

<table>
<thead>
<tr>
<th>Material</th>
<th>Ecology - soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium oxide, non-fibrous (1344-28-1)</td>
<td>No data available.</td>
</tr>
<tr>
<td>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</td>
<td>Highly mobile in soil.</td>
</tr>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>Adsorbs into the soil.</td>
</tr>
</tbody>
</table>

### Other adverse effects

<table>
<thead>
<tr>
<th>Effect on the global warming</th>
<th>None known</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other information</td>
<td>No other effects known.</td>
</tr>
</tbody>
</table>

## SECTION 13: Disposal considerations

### Disposal methods

- **Product/Packaging disposal recommendations**: Dispose in a safe manner in accordance with local/national regulations. Chromite (Cr\(^{3+}\)) may in normal use be converted chemically to a chromate (Cr\(^{6+}\)). Hexavalent chromium (Cr\(^{6+}\)) is considered a hazardous material.
- **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

<table>
<thead>
<tr>
<th>Material</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>

<table>
<thead>
<tr>
<th>Material</th>
<th>CERCLA RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</td>
<td>5000 lb</td>
</tr>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>Subject to reporting requirements of United States SARA Section 313</td>
</tr>
</tbody>
</table>
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### 15.2. International regulations

**CANADA**

- aluminium oxide, non-fibrous (1344-28-1)
  - Listed on the Canadian DSL (Domestic Substances List)

- phosphoric acid, conc=75%, aqueous solution (7664-38-2)
  - Listed on the Canadian DSL (Domestic Substances List)

- chromium(III) oxide (1308-38-9)
  - 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

**Rescoram 20 CR (Mixture)**

<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>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</td>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
<tr>
<td>chromium(III) oxide (1308-38-9)</td>
<td>U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance 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>

**SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Revision date**

: 09/13/2021

**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:**

- **H314**
  - Causes severe skin burns and eye damage

- **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.