

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : Ref Bond Spray Stiff  
 CAS-No. : Mixture  
 Product code : 2362  
 Other means of identification : Alumina-Silicate Wet Chemically Bonded Mortar-Slurry

#### 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](mailto:SDS@RescoProducts.com) - [WWW.RescoProducts.com](http://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 (After drying or heating, 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  
 H319 - Causes serious eye irritation  
 H350 - May cause cancer (After drying or heating, Inhalation)  
 Precautionary statements (GHS US) : P202 - Do not handle until all safety precautions have been read and understood.  
 P280 - Wear eye protection, protective gloves, protective clothing.  
 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.

#### 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

Name	Product identifier	%	GHS US classification
quartz	(CAS-No.) 14808-60-7	20 – 50	Carc. 1A, H350
phosphoric acid, conc=75%, aqueous solution	(CAS-No.) 7664-38-2	5 – 10	Skin Corr. 1B, H314
cristobalite	(CAS-No.) 14464-46-1	1 – 5	Carc. 1A, H350

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 : Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.

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- 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 serious 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 : No unsuitable extinguishing media known.

### 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 : If spilled, may cause the floor to be slippery.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Stop release.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Plug the leak, cut off the supply.  
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage.

### 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 : Avoid contact with eyes. Avoid contact with skin.  
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 in original container. Keep container closed when not in use.  
Incompatible products : Strong bases. Avoid contact with materials: such as sulfides and sulfites which could release toxic gases, mixing with strong bases because high heat of reaction can generate steam, and metals which could liberate hydrogen, a flammable gas.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Ref Bond Spray Stiff (Mixture)</b>	
No additional information available	
<b>crystalite (14464-46-1)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> respirable dust
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> respirable dust
<b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b>	
No additional information available	
<b>quartz (14808-60-7)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (Silica-Crystalline Quartz; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)

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### USA - OSHA - Occupational Exposure Limits

Local name	Silica, crystalline quartz, respirable dust
OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> respirable dust
Remark (OSHA)	(3) See Table Z-3.

### 8.2. Appropriate engineering controls

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

### 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:

After air drying or heating. 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

Physical state	: Liquid
Appearance	: Slurry.
Color	: light brown
Odor	: Acid Odor
Odor threshold	: Not applicable
pH	: No data available
Melting point	: > 3000 °F
Freezing point	: ≈ 32 °F
Boiling point	: Not applicable
Critical temperature	: Not applicable
Critical pressure	: Not applicable
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: Not applicable
Relative evaporation rate (ether=1)	: Not applicable
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: Not applicable
Vapor pressure at 50 °C	: Not applicable
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Moderately soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: Not Applicable
Explosion limits	: Not applicable
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

Air Setting.

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

No additional information available

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### 10.5. Incompatible materials

Strong bases. Avoid contact with materials: such as sulfides and sulfites which could release toxic gases, mixing with strong bases because high heat of reaction can generate steam, and metals which could liberate hydrogen, a flammable gas.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 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 (After drying or heating, Inhalation).

#### 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	: 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 serious eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

#### Ref Bond Spray Stiff (Mixture)

Persistence and degradability	Not established.
<b>crystalalite (14464-46-1)</b>	
Persistence and degradability	Mineral. Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b>	
Persistence and degradability	Biodegradability: not applicable.
<b>quartz (14808-60-7)</b>	
Persistence and degradability	Not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

### 12.3. Bioaccumulative potential

#### Ref Bond Spray Stiff (Mixture)

Bioaccumulative potential	Not established.
<b>crystalalite (14464-46-1)</b>	
Bioaccumulative potential	No data available.
<b>phosphoric acid, conc=75%, aqueous solution (7664-38-2)</b>	
Bioaccumulative potential	No test data of component(s) available.
<b>quartz (14808-60-7)</b>	
Bioaccumulative potential	No data available.
<b>crystalalite (14464-46-1)</b>	
Ecology - soil	No data available.

### 12.4. Mobility in soil

#### crystalalite (14464-46-1)

Ecology - soil	No data available.
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### phosphoric acid, conc=75%, aqueous solution (7664-38-2)

Ecology - soil	Highly mobile in soil.
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#### 12.5. Other adverse effects

Effect on the global warming	None known
Other information	: Avoid release to the environment.

### 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

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

##### Ref Bond Spray Stiff (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

##### phosphoric acid, conc=75%, aqueous solution (7664-38-2)

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ	5000 lb
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#### 15.2. International regulations

##### CANADA

##### crystalite (14464-46-1)

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)

#### 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

##### Ref Bond Spray Stiff (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 <a href="http://WWW.P65Warnings.ca.gov">WWW.P65Warnings.ca.gov</a>
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##### crystalite (14464-46-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

##### quartz (14808-60-7)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

#### Component

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

#### State or local regulations

U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

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Component	State or local regulations
Cristobalite (14464-46-1)	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
Quartz (14808-60-7)	U.S. - New Jersey - Right to Know Hazardous Substance List

### SECTION 16: Other information

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Revision date

: 06/07/2021

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.*