

Safety Data Sheet



Section 1: Identification

Product identifier

Product Name • Reno NoCem 92
Product Code • 186507

Relevant identified uses of the substance or mixture and uses advised against

Recommended use • Refractory applications

Details of the supplier of the safety data sheet

Manufacturer • Reno Refractories, Inc.
 P O Box 201
 Morris, AL 35116
 United States
 www.renorefractories.com
 sales@renorefractories.com
Telephone (General) • 205-647-0240

Emergency telephone number

Manufacturer • 1-800-262-8200 - CHEMTREC

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 2

Label elements

OSHA HCS 2012

WARNING



Hazard statements • May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention • Do not breathe dust.

Response • Get medical advice/attention if you feel unwell.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards**OSHA HCS 2012**

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

Classification of the substance or mixture**WHMIS**

- Other Toxic Effects - D2B

Label elements**WHMIS****WHMIS**

- Other Toxic Effects - D2B

Other hazards**WHMIS**

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients**Substances**

- Material does not meet the criteria of a substance.

Mixtures

Composition				
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive
Aluminum oxide	CAS:1344-28-1	80.835% TO 93%	Inhalation-Rat LC50 • 0.2 mg/L 5 Hour(s) 28 Week(s)	OSHA HCS 2012: Not Classified
Phosphoric acid, magnesium salt (1:1)	CAS:7757-86-0	4.8% TO 7.2%	NDA	OSHA HCS 2012: Not Classified
Aluminum Silicate	Proprietary	2.61% TO 5.22%	NDA	OSHA HCS 2012: STOT RE 2 (Lungs)
Magnesium oxide	CAS:1309-48-4	< 1.07%	NDA	OSHA HCS 2012: Not Classified
Amorphous silica	CAS:112926-00-8	0% TO 0.8%	NDA	OSHA HCS 2012: Not Classified
Silica, amorphous	CAS:7631-86-9	< 0.78%	NDA	OSHA HCS 2012: Not Classified
Amorphous/fused silica	CAS:60676-86-0	< 0.72%	NDA	OSHA HCS 2012: Not Classified
Iron oxide	CAS:1309-37-1	< 0.36%	NDA	OSHA HCS 2012: Not Classified
Sodium hydroxide	CAS:1310-73-2	< 0.09%	NDA	OSHA HCS 2012: Exposure limits
Calcium oxide	CAS:1305-78-8	< 0.09%	NDA	OSHA HCS 2012: Exposure limits

Quartz	CAS:14808-60 -7	< 0.018%	NDA	OSHA HCS 2012: Exposure limits
Urea, 1,3-diethyl-2-thio-	CAS:105-55-5	< 0.015%	Ingestion/Oral-Rat LD50 • 316 mg/kg	OSHA HCS 2012: WHMIS:
Cristobalite	CAS:14464-46 -1	< 0.009%	NDA	OSHA HCS 2012: Carc. 1A

Section 4: First-Aid Measures

Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately.

Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. If skin irritation occurs: Get medical advice/attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- Rinse mouth. Do not give anything by mouth to an unconscious person. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to material other than this product may have occurred.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media • Material is non-combustible. In case of fire use media as appropriate for surrounding fire.

Unsuitable Extinguishing Media

- None known.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- None known.

Hazardous Combustion Products

- None known.

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Isolate hazard area and deny entry to unauthorized and/or unprotected personnel. Do not walk through spilled material. Ensure adequate ventilation to remove vapors, fumes, dust etc. Wear appropriate personal protective equipment, avoid direct contact.

Emergency Procedures

- Ventilate closed spaces before entering. Isolate hazard area and deny entry to unauthorized and/or unprotected personnel.

Environmental precautions

- No specific actions or treatments recommended related to exposure to this material.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Avoid generating dust.
 FOR SMALL SPILLS: Clean with a vacuum with a filtration system sufficient to remove and prevent recirculation of crystalline silica (a vacuum equipped with a high-efficiency particulate air (HEPA) filter is recommended).
 FOR LARGE SPILLS: Use a fine spray or mist to control dust creation and carefully scoop or shovel into clean dry container for later reuse or disposal.
 If, an appropriate vacuum is unavailable, only wet-clean-up methods should be used (i.e. misting). Moisture should be added as necessary to reduce exposure to airborne respirable silica dust.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Use only in well ventilated areas. Wear appropriate personal protective equipment, avoid direct contact. Wear long sleeves and/or protective coveralls. Do not breathe dust. Avoid contact with skin, eyes, and clothing. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Contaminated clothing must be vacuumed before removal. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage

- Keep container closed. Store in a covered location. Store in a cool, dry place. Keep from freezing. Storage and work area should be periodically cleaned to minimize dust accumulation.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Ontario	Canada Quebec	Mexico	NIOSH
Amorphous silica (112926-00-8)	TWAs	Not established	Not established	6 mg/m3 TWAEV (containing no Asbestos and <1% Crystalline silica, respirable dust)	10 mg/m3 TWA VLE-PPT	Not established
Cristobalite (14464-46-1)	TWAs	0.025 mg/m3 TWA (respirable particulate matter)	0.05 mg/m3 TWA (designated substances regulation, respirable, listed under Silica, crystalline)	0.05 mg/m3 TWAEV (respirable dust)	0.05 mg/m3 TWA VLE-PPT (respirable fraction)	0.05 mg/m3 TWA (respirable dust)
Quartz (14808-60-7)	TWAs	0.025 mg/m3 TWA (respirable particulate matter)	0.10 mg/m3 TWA (designated substances regulation, respirable, listed under Silica, crystalline)	0.1 mg/m3 TWAEV (respirable dust)	0.1 mg/m3 TWA VLE-PPT (respirable fraction)	0.05 mg/m3 TWA (respirable dust)

Sodium hydroxide (1310-73-2)	Ceilings	2 mg/m3 Ceiling	2 mg/m3 Ceiling	2 mg/m3 Ceiling	2 mg/m3 Ceiling	2 mg/m3 Ceiling
Calcium oxide (1305-78-8)	TWAs	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWAEV	2 mg/m3 TWA VLE-PPT	2 mg/m3 TWA
Iron oxide (1309-37-1)	STELs	Not established	Not established	Not established	10 mg/m3 STEL [PPT-CT] (as Fe)	Not established
	TWAs	5 mg/m3 TWA (respirable particulate matter)	5 mg/m3 TWA (respirable)	5 mg/m3 TWAEV (dust and fume, as Fe); 10 mg/m3 TWAEV (containing no Asbestos and <1% Crystalline silica, regulated under Rouge, total dust)	5 mg/m3 TWA VLE-PPT	5 mg/m3 TWA (dust and fume, as Fe)
Amorphous/fused silica (60676-86-0)	TWAs	Not established	0.1 mg/m3 TWA (respirable)	0.1 mg/m3 TWAEV (containing no Asbestos and <1% Crystalline silica, respirable dust)	0.1 mg/m3 TWA VLE-PPT; 10 mg/m3 TWA VLE-PPT (inhalable particulate); 3 mg/m3 TWA VLE-PPT (respirable particulate)	Not established
Silica, amorphous (7631-86-9)	TWAs	Not established	Not established	Not established	Not established	6 mg/m3 TWA
Magnesium oxide (1309-48-4)	TWAs	10 mg/m3 TWA (inhalable particulate matter)	10 mg/m3 TWA (inhalable)	10 mg/m3 TWAEV (fume, as Mg)	10 mg/m3 TWA VLE-PPT (fume, as Mg)	Not established
Aluminum oxide (1344-28-1)	TWAs	Not established	Not established	10 mg/m3 TWAEV (containing no Asbestos and <1% Crystalline silica, total dust, as Al)	10 mg/m3 TWA VLE-PPT	Not established

Exposure Limits/Guidelines (Con't.)

	Result	OSHA
Cristobalite (14464-46-1)	TWAs	50 µg/m3 TWA (listed under Respirable crystalline silica)
Quartz (14808-60-7)	TWAs	50 µg/m3 TWA (listed under Respirable crystalline silica)
Sodium hydroxide (1310-73-2)	TWAs	2 mg/m3 TWA
Calcium oxide (1305-78-8)	TWAs	5 mg/m3 TWA
Iron oxide (1309-37-1)	TWAs	10 mg/m3 TWA (fume); 15 mg/m3 TWA (total dust, listed under Rouge); 5 mg/m3 TWA (respirable fraction, listed under Rouge)
Magnesium oxide (1309-48-4)	TWAs	15 mg/m3 TWA (fume, total particulate)
Aluminum oxide (1344-28-1)	TWAs	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)

Exposure Control Notations

Mexico

- Aluminum oxide (1344-28-1): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)
- Iron oxide (1309-37-1): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)

Canada Ontario

- Quartz (14808-60-7): **Designated Substances:** (0.10 mg/m³ TWA (respirable fraction, listed under Silica, crystalline))
- Cristobalite (14464-46-1): **Designated Substances:** (0.05 mg/m³ TWA (respirable fraction, listed under Silica, crystalline))

Canada Quebec

- Quartz (14808-60-7): **Carcinogens:** (C2 carcinogen - effect suspected in humans)

ACGIH

- Quartz (14808-60-7): **Carcinogens:** (A2 - Suspected Human Carcinogen)
- Iron oxide (1309-37-1): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- Magnesium oxide (1309-48-4): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- Cristobalite (14464-46-1): **Carcinogens:** (A2 - Suspected Human Carcinogen)

Exposure Limits Supplemental

OSHA

- Amorphous/fused silica (60676-86-0): **Mineral Dusts:** ((80)/(%) SiO₂) mg/m³ TWA; 20 mppcf TWA)
- Quartz (14808-60-7): **Mineral Dusts:** ((250)/(%) SiO₂ + 5) mppcf TWA, respirable fraction; (10)/(%) SiO₂ + 2) mg/m³ TWA, respirable fraction)
- Silica, amorphous (7631-86-9): **Mineral Dusts:** (20 mppcf TWA; (80)/(%) SiO₂) mg/m³ TWA)
- Cristobalite (14464-46-1): **Mineral Dusts:** ((1/2)(250)/(%) SiO₂ + 5) mppcf TWA, respirable fraction; (1/2)(10)/(%) SiO₂ + 2) mg/m³ TWA, respirable fraction)
- Amorphous silica (112926-00-8): **Mineral Dusts:** (20 mppcf TWA; (80)/(%) SiO₂) mg/m³ TWA)

ACGIH

- Quartz (14808-60-7): **TLV Basis - Critical Effects:** (lung cancer; pulmonary fibrosis)
- Iron oxide (1309-37-1): **TLV Basis - Critical Effects:** (pneumoconiosis)
- Sodium hydroxide (1310-73-2): **TLV Basis - Critical Effects:** (eye, skin and upper respiratory tract irritation)
- Calcium oxide (1305-78-8): **TLV Basis - Critical Effects:** (upper respiratory tract irritation)
- Magnesium oxide (1309-48-4): **TLV Basis - Critical Effects:** (metal fume fever; upper respiratory tract irritation)
- Cristobalite (14464-46-1): **TLV Basis - Critical Effects:** (lung cancer; pulmonary fibrosis)

Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment). Collection systems must be designed and maintained to prevent the accumulation and recirculation of respirable silica into the workplace.

Personal Protective Equipment

Respiratory

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Hands

- Wear appropriate gloves.

Skin/Body

- Wear long sleeves and/or protective coveralls.

General Industrial Hygiene Considerations

- Do not breathe dust. Avoid contact with skin, eyes or clothing. Do not remove dusts from clothing by blowing or shaking. Do not eat, drink or smoke during work. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste. Dispose of in an approved landfill.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEL = Short Term Exposure Limits are based on 15-minute exposures

NIOSH = National Institute of Occupational Safety and Health

TWAEV = Time-Weighted Average Exposure Value

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Gray granular dry powder with an earthy odor.
Color	Gray	Odor	Earthy
Particulate Size	600 µ	Odor Threshold	No data available
General Properties			
Boiling Point	No data available	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	= 2.53 Water=1	Water Solubility	Negligible < 0.1 %
Viscosity	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	VOC (Wt.)	0 %
VOC (Vol.)	0 %		
Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- No data available

Incompatible materials

- No data available

Hazardous decomposition products

- No data available

Section 11 - Toxicological Information

Information on toxicological effects

Components		
Silica, amorphous (< 0.78%)	7631-86-9	Irritation: Eye-Rabbit • 25 mg 24 Hour(s) • Mild irritation

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	OSHA HCS 2012 • Data lacking
Skin sensitization	OSHA HCS 2012 • Data lacking
Respiratory sensitization	OSHA HCS 2012 • Data lacking
Aspiration Hazard	OSHA HCS 2012 • Data lacking
Carcinogenicity	OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	OSHA HCS 2012 • Data lacking
STOT-SE	OSHA HCS 2012 • Data lacking
STOT-RE	OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 2

Route(s) of entry/exposure

- Inhalation, Skin, Eye, Ingestion

Medical Conditions Aggravated by Exposure

- Any pre-existing conditions of the lungs. Disorders of the lungs.

Potential Health Effects

Inhalation

Acute (Immediate)

- Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)

- Chronic overexposure to dust containing respirable sized crystalline silica can cause delayed lung injury (silicosis). Inhalation of dust containing crystalline silica pulmonary diseases such as asthma and lung disorder associated with smoking.

Skin

Acute (Immediate)

- Exposure to dust may cause mechanical irritation.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed)

- No data available.

Carcinogenic Effects

- This material does contain components that may cause cancer, however based on regulatory criteria this material is not classified as a carcinogen.

Carcinogenic Effects			
	CAS	IARC	NTP
Cristobalite	14464-46-1	Group 1-Carcinogenic	Not Listed
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen

Section 12 - Ecological Information

Toxicity

- Material data lacking.

Persistence and degradability

- Material data lacking.

Bioaccumulative potential

- Material data lacking.

Mobility in Soil

- Material data lacking.

Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

Special precautions for user • None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

Section 15 - Regulatory Information

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

SARA Hazard Classifications • Chronic

State Right To Know				
Component	CAS	MA	NJ	PA
Aluminum oxide	1344-28-1	Yes	Yes	Yes
Amorphous silica	112926-00-8	Yes	Yes	Yes
Amorphous/fused silica	60676-86-0	Yes	Yes	No

Calcium oxide	1305-78-8	Yes	Yes	Yes
Cristobalite	14464-46-1	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	Yes	Yes
Magnesium oxide	1309-48-4	Yes	Yes	Yes
Aluminum Silicate	<i>Proprietary</i>	No	No	No
Phosphoric acid, magnesium salt (1:1)	7757-86-0	No	No	No
Quartz	14808-60-7	Yes	Yes	Yes
Silica, amorphous	7631-86-9	Yes	No	Yes
Sodium hydroxide	1310-73-2	Yes	Yes	Yes
Urea, 1,3-diethyl-2-thio-	105-55-5	Yes	No	No

Inventory			
Component	CAS	Canada DSL	TSCA
Aluminum oxide	1344-28-1	Yes	Yes
Amorphous silica	112926-00-8	Yes	No
Amorphous/fused silica	60676-86-0	Yes	Yes
Calcium oxide	1305-78-8	Yes	Yes
Cristobalite	14464-46-1	Yes	Yes
Iron oxide	1309-37-1	Yes	Yes
Magnesium oxide	1309-48-4	Yes	Yes
Aluminum Silicate	<i>Proprietary</i>	Yes	Yes
Phosphoric acid, magnesium salt (1:1)	7757-86-0	Yes	Yes
Quartz	14808-60-7	Yes	Yes
Silica, amorphous	7631-86-9	Yes	Yes
Sodium hydroxide	1310-73-2	Yes	Yes
Urea, 1,3-diethyl-2-thio-	105-55-5	Yes	Yes

Canada

Labor

Canada - WHMIS 1988 - Classifications of Substances

• Urea, 1,3-diethyl-2-thio-	105-55-5	Not Listed
• Aluminum Silicate	<i>Proprietary</i>	Not Listed
• Calcium oxide	1305-78-8	E
• Iron oxide	1309-37-1	Uncontrolled product according to WHMIS classification criteria
• Magnesium oxide	1309-48-4	Uncontrolled product according to WHMIS classification criteria
		E (including 0.04% in aqueous solution, 0.04N, 0.08%, 0.4% in

• Sodium hydroxide	1310-73-2	aqueous solution, 2%, 2.5%, 4% in aqueous solution, 5%, 10%, 16%, 20%, 40%, 50% in aqueous solution, 8.7N)
• Aluminum oxide	1344-28-1	Uncontrolled product according to WHMIS classification criteria D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.)
• Cristobalite	14464-46-1	Uncontrolled product according to WHMIS classification criteria D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.)
• Amorphous silica	112926-00-8	Not Listed
• Silica, amorphous	7631-86-9	Uncontrolled product according to WHMIS classification criteria
• Amorphous/fused silica	60676-86-0	Uncontrolled product according to WHMIS classification criteria D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.)
• Quartz	14808-60-7	Uncontrolled product according to WHMIS classification criteria D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.)
• Phosphoric acid, magnesium salt (1:1)	7757-86-0	Not Listed

Canada - WHMIS 1988 - Ingredient Disclosure List

• Urea, 1,3-diethyl-2-thio-	105-55-5	Not Listed
• Aluminum Silicate	<i>Proprietary</i>	Not Listed
• Calcium oxide	1305-78-8	1 %
• Iron oxide	1309-37-1	1 %
• Magnesium oxide	1309-48-4	1 %
• Sodium hydroxide	1310-73-2	1 %
• Aluminum oxide	1344-28-1	1 %
• Cristobalite	14464-46-1	1 %
• Amorphous silica	112926-00-8	Not Listed
• Silica, amorphous	7631-86-9	1 %
• Amorphous/fused silica	60676-86-0	1 %
• Quartz	14808-60-7	1 %
• Phosphoric acid, magnesium salt (1:1)	7757-86-0	Not Listed

United States

Environment

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Urea, 1,3-diethyl-2-thio-	105-55-5	Not Listed
• Aluminum Silicate	<i>Proprietary</i>	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Magnesium oxide	1309-48-4	Not Listed

• Sodium hydroxide	1310-73-2	1000 lb final RQ; 454 kg final RQ
• Aluminum oxide	1344-28-1	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Amorphous silica	112926-00-8	Not Listed
• Silica, amorphous	7631-86-9	Not Listed
• Amorphous/fused silica	60676-86-0	Not Listed
• Quartz	14808-60-7	Not Listed
• Phosphoric acid, magnesium salt (1:1)	7757-86-0	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Urea, 1,3-diethyl-2-thio-	105-55-5	Not Listed
• Aluminum Silicate	<i>Proprietary</i>	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Magnesium oxide	1309-48-4	Not Listed
• Sodium hydroxide	1310-73-2	Not Listed
• Aluminum oxide	1344-28-1	1.0 % de minimis concentration (fibrous forms)
• Cristobalite	14464-46-1	Not Listed
• Amorphous silica	112926-00-8	Not Listed
• Silica, amorphous	7631-86-9	Not Listed
• Amorphous/fused silica	60676-86-0	Not Listed
• Quartz	14808-60-7	Not Listed
• Phosphoric acid, magnesium salt (1:1)	7757-86-0	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• Urea, 1,3-diethyl-2-thio-	105-55-5	Not Listed
• Aluminum Silicate	<i>Proprietary</i>	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Magnesium oxide	1309-48-4	Not Listed
• Sodium hydroxide	1310-73-2	
• Aluminum oxide	1344-28-1	
• Cristobalite	14464-46-1	Not Listed
• Amorphous silica	112926-00-8	Not Listed
• Silica, amorphous	7631-86-9	Not Listed
• Amorphous/fused silica	60676-86-0	Not Listed
• Quartz	14808-60-7	Not Listed
• Phosphoric acid, magnesium salt (1:1)	7757-86-0	Not Listed

Other Information

- WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16 - Other Information

- Revision Date** • 12/March/2018
- Last Revision Date** • 07/June/2015
- Preparation Date** • 01/June/2009

Disclaimer/Statement of Liability

- The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. Reno Refractories MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of use or application. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key to abbreviations

NDA = No data available