

## Safety Data Sheet



## Section 1: Identification

## Product identifier

**Product Name** • **Concast 26C**  
**Product Code** • 105800

## 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** • Skin Irritation 2  
 Serious Eye Damage 1  
 Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation  
 Carcinogenicity 1A  
 Specific Target Organ Toxicity Repeated Exposure 1

## Label elements

**OSHA HCS 2012**

**DANGER**

**Hazard statements** • Causes skin irritation  
 Causes serious eye damage  
 May cause respiratory irritation  
 May cause cancer.

Causes damage to organs through prolonged or repeated exposure.

## Precautionary statements

- Prevention** • Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves, clothing, and eye/face protection, .
- Response** • IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
If on skin: Wash with plenty of water .  
Take off contaminated clothing and wash before reuse.  
If skin irritation occurs: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor/physician.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
Specific treatment, see supplemental first aid information.  
Get medical advice/attention if you feel unwell.  
IF exposed or concerned: Get medical advice/attention.
- Storage/Disposal** • Store in a well-ventilated place. Keep container tightly closed.  
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 - D2A  
Corrosive - E

## Label elements

### WHMIS



### WHMIS

- Other Toxic Effects - D2A  
Corrosive - E

## 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
Mullite	CAS:1302-93-8	42.25% TO 44.2%	NDA	OSHA HCS 2012: STOT RE 2 (Lungs)
Calcium Aluminate	Proprietary	10.5% TO 24%	NDA	OSHA HCS 2012: Eye Dam. 1; Skin Irrit. 2; STOT SE 3: Resp. Irrit.;
Cristobalite	CAS:14464-46-1	9.7% TO 17.01%	NDA	OSHA HCS 2012: Carc. 1A;
Silica, amorphous	CAS:7631-86-9	6.5% TO 13.6%	NDA	OSHA HCS 2012: Not Classified
Aluminum(III) silicate (2:1)	CAS:1302-76-7	8.5% TO 12.35%	NDA	OSHA HCS 2012: STOT RE 2 (Lungs)
Quartz	CAS:14808-60-7	< 1.829%	NDA	OSHA HCS 2012: Carc. 1A; STOT RE 1 (Lungs);
Amorphous/fused silica	CAS:60676-86-0	0% TO 1.4%	NDA	OSHA HCS 2012: Not Classified
Titanium dioxide	CAS:13463-67-7	< 1.3975%	NDA	OSHA HCS 2012: Carc. 2;
Iron oxide	CAS:1309-37-1	0% TO 0.96%	NDA	OSHA HCS 2012: Not Classified
Sodium hydroxide	CAS:1310-73-2	0% TO 0.19%	NDA	OSHA HCS 2012: Skin Corr. 1B; Eye Corr. 1
Magnesium oxide	CAS:1309-48-4	0% TO 0.14%	NDA	OSHA HCS 2012: Not Classified
1-Propene, homopolymer	CAS:9003-07-0	< 0.1%	Ingestion/Oral-Rat LD50 • >8 g/kg	OSHA HCS 2012: Exposure limits
Zirconium oxide	CAS:1314-23-4	< 0.085%	NDA	OSHA HCS 2012: Exposure limits
Calcium oxide	CAS:1305-78-8	0% TO 0.073%	NDA	OSHA HCS 2012: Exposure limits
Potassium oxide	CAS:12136-45-7	< 0.014%	NDA	OSHA HCS 2012: Exposure limits
Aluminum oxide	CAS:1344-28-1	< 0.01%	NDA	OSHA HCS 2012: Not Classified

## Section 4: First-Aid Measures

### Description of first aid measures

#### Inhalation

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

materialsother 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 touch or walk through spilled material. Ensure adequate ventilation to remove vapors, fumes, dust etc.

**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** • Do not breathe dust. Avoid contact with skin, eyes, and clothing. Minimize dust generation and accumulation. Use good safety and industrial hygiene practices. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Wear long sleeves and/or protective coveralls. 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. Do not use in areas without adequate ventilation.

### Conditions for safe storage, including any incompatibilities

**Storage** • Store in a covered location. Keep container closed. 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
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
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)
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
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
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
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
Titanium dioxide (13463-67-7)	STELs	Not established	Not established	Not established	20 mg/m3 STEL [PPT-CT] (as Ti)	Not established
	TWAs	10 mg/m3 TWA	10 mg/m3 TWA	10 mg/m3 TWAEV (containing no Asbestos and <1% Crystalline silica, total dust)	10 mg/m3 TWA VLE-PPT (as Ti)	Not established
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)
Silica, amorphous (7631-86-9)	TWAs	Not established	Not established	Not established	Not established	6 mg/m3 TWA
			0.05 mg/m3 TWA			

Cristobalite (14464-46-1)	TWAs	0.025 mg/m <sup>3</sup> TWA (respirable particulate matter)	(designated substances regulation, respirable, listed under Silica, crystalline)	0.05 mg/m <sup>3</sup> TWAEV (respirable dust)	0.05 mg/m <sup>3</sup> TWA VLE-PPT (respirable fraction)	0.05 mg/m <sup>3</sup> TWA (respirable dust)
Exposure Limits/Guidelines (Con't.)						
			Result	OSHA		
Sodium hydroxide (1310-73-2)			TWAs	2 mg/m <sup>3</sup> TWA		
Iron oxide (1309-37-1)			TWAs	10 mg/m <sup>3</sup> TWA (fume); 15 mg/m <sup>3</sup> TWA (total dust, listed under Rouge); 5 mg/m <sup>3</sup> TWA (respirable fraction, listed under Rouge)		
Calcium oxide (1305-78-8)			TWAs	5 mg/m <sup>3</sup> TWA		
Magnesium oxide (1309-48-4)			TWAs	15 mg/m <sup>3</sup> TWA (fume, total particulate)		
Aluminum oxide (1344-28-1)			TWAs	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)		
Titanium dioxide (13463-67-7)			TWAs	15 mg/m <sup>3</sup> TWA (total dust)		
Quartz (14808-60-7)			TWAs	50 µg/m <sup>3</sup> TWA (listed under Respirable crystalline silica)		
Cristobalite (14464-46-1)			TWAs	50 µg/m <sup>3</sup> TWA (listed under Respirable crystalline silica)		

## Exposure Control Notations

### Canada Ontario

- Cristobalite (14464-46-1): **Designated Substances:** (0.05 mg/m<sup>3</sup> TWA (respirable fraction, listed under Silica, crystalline))
- Quartz (14808-60-7): **Designated Substances:** (0.10 mg/m<sup>3</sup> TWA (respirable fraction, listed under Silica, crystalline))

### Canada Quebec

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

### ACGIH

- 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)
- Titanium dioxide (13463-67-7): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- Cristobalite (14464-46-1): **Carcinogens:** (A2 - Suspected Human Carcinogen)
- Quartz (14808-60-7): **Carcinogens:** (A2 - Suspected Human Carcinogen)

## Exposure Limits Supplemental

### OSHA

- Cristobalite (14464-46-1): **Mineral Dusts:** ((1/2)(250)/(%SiO<sub>2</sub> + 5) mppcf TWA, respirable fraction; (1/2)(10)/(%SiO<sub>2</sub> + 2) mg/m<sup>3</sup> TWA, respirable fraction)
- Quartz (14808-60-7): **Mineral Dusts:** ((250)/(%SiO<sub>2</sub> + 5) mppcf TWA, respirable fraction; (10)/(%SiO<sub>2</sub> + 2) mg/m<sup>3</sup> TWA, respirable fraction)
- Amorphous/fused silica (60676-86-0): **Mineral Dusts:** ((80)/(% SiO<sub>2</sub>) mg/m<sup>3</sup> TWA; 20 mppcf TWA)
- Silica, amorphous (7631-86-9): **Mineral Dusts:** (20 mppcf TWA; (80)/(% SiO<sub>2</sub>) mg/m<sup>3</sup> TWA)

### ACGIH

- Calcium oxide (1305-78-8): **TLV Basis - Critical Effects:** (upper respiratory tract irritation)
- Iron oxide (1309-37-1): **TLV Basis - Critical Effects:** (pneumoconiosis)
- Magnesium oxide (1309-48-4): **TLV Basis - Critical Effects:** (metal fume fever; upper respiratory tract irritation)
- Sodium hydroxide (1310-73-2): **TLV Basis - Critical Effects:** (eye, skin and upper respiratory tract irritation)
- Titanium dioxide (13463-67-7): **TLV Basis - Critical Effects:** (lower respiratory tract irritation)
- Cristobalite (14464-46-1): **TLV Basis - Critical Effects:** (lung cancer; pulmonary fibrosis)
- Quartz (14808-60-7): **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**

- Avoid breathing 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 hands before eating, drinking, or smoking. 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**

<b>Material Description</b>			
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
<b>General Properties</b>			
Boiling Point	No data available	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	Not relevant
Specific Gravity/Relative Density	2.2 to 2.9 Water=1	Water Solubility	Negligible < 0.1 %
Viscosity	No data available		
<b>Volatility</b>			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	VOC (Wt.)	0 %
<b>Flammability</b>			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	No data available

Flammability (solid, gas)	No data available		
<b>Environmental</b>			
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 not indicated.

### Conditions to avoid

- None known.

### Incompatible materials

- None known.

### Hazardous decomposition products

- None known.

## Section 11 - Toxicological Information

### Information on toxicological effects

Components		
Sodium hydroxide (0% TO 0.19%)	1310-73-2	<b>Irritation:</b> Eye-Rabbit • 50 µg 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Severe irritation
Titanium dioxide (< 1.3975%)	13463-67-7	<b>Irritation:</b> Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; <b>Tumorigen / Carcinogen:</b> Inhalation-Rat TLo • 250 mg/m <sup>3</sup> 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic: Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: Tumors</i>
Cristobalite (9.7% TO 17.01%)	14464-46-1	<b>Acute Toxicity:</b> Inhalation-Human TLo • 16 mppcf 8 Hour(s) 17.9 Year(s)-Intermittent; <i>Lungs, Thorax, or Respiration: Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration: Cough; Lungs, Thorax, or Respiration: Dyspnea</i>
Silica, amorphous (6.5% TO 13.6%)	7631-86-9	<b>Irritation:</b> 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 • Skin Irritation 2
Serious eye damage/Irritation	OSHA HCS 2012 • Serious Eye Damage 1
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 • Carcinogenicity 1A
Germ Cell Mutagenicity	OSHA HCS 2012 • Data lacking



<b>Toxicity for Reproduction</b>	OSHA HCS 2012 • Data lacking
<b>STOT-SE</b>	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
<b>STOT-RE</b>	OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1

- Target Organs**
  - [[206]]
- 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)**
    - May cause respiratory irritation.
  - 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)**
    - Causes skin irritation. Exposure to dust may cause irritation.
  - Chronic (Delayed)**
    - No data available.
- Eye**
  - Acute (Immediate)**
    - Causes serious eye damage. 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**
  - May cause cancer. IARC studies have shown sufficient evidence from animal studies to categorize crystalline silica as a group 1 carcinogen.

<b>Carcinogenic Effects</b>			
	<b>CAS</b>	<b>IARC</b>	<b>NTP</b>
Titanium dioxide	13463-67-7	Group 2B-Possible Carcinogen	Not Listed
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen
Cristobalite	14464-46-1	Group 1-Carcinogenic	Not Listed

**Key to abbreviations**

TC = Toxic Concentration

TD = Toxic Dose

**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** • Acute, Chronic

State Right To Know				
Component	CAS	MA	NJ	PA
1-Propene, homopolymer	9003-07-0	No	No	No
Calcium Aluminate	<i>Proprietary</i>	No	No	No
Aluminum oxide	1344-28-1	Yes	Yes	Yes
Aluminum(III) silicate (2:1)	1302-76-7	No	No	No
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
Mullite	1302-93-8	No	No	No
Potassium oxide	12136-45-7	No	Yes	No
Quartz	14808-60-7	Yes	Yes	Yes

Silica, amorphous	7631-86-9	Yes	No	Yes
Sodium hydroxide	1310-73-2	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	Yes	Yes
Zirconium oxide	1314-23-4	Yes	No	No

Inventory			
Component	CAS	Canada DSL	TSCA
1-Propene, homopolymer	9003-07-0	Yes	Yes
Calcium Aluminate	<i>Proprietary</i>	Yes	Yes
Aluminum oxide	1344-28-1	Yes	Yes
Aluminum(III) silicate (2:1)	1302-76-7	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
Mullite	1302-93-8	Yes	Yes
Potassium oxide	12136-45-7	Yes	Yes
Quartz	14808-60-7	Yes	Yes
Silica, amorphous	7631-86-9	Yes	Yes
Sodium hydroxide	1310-73-2	Yes	Yes
Titanium dioxide	13463-67-7	Yes	Yes
Zirconium oxide	1314-23-4	Yes	Yes

**Canada**

Labor Canada - WHMIS 1988 - Classifications of Substances			
• Calcium Aluminate	<i>Proprietary</i>		Uncontrolled product according to WHMIS classification criteria (listed under Aluminum calcium oxide (2:1))
• Potassium oxide	12136-45-7		E
• Mullite	1302-93-8		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
• Sodium hydroxide	1310-73-2		E (including 0.04% in aqueous solution, 0.04N, 0.08%, 0.4% in aqueous solution, 2%, 2.5%, 4% in aqueous solution, 5%, 10%, 16%, 20%, 40%, 50% in aqueous solution, 8.7N)

• Titanium dioxide	13463-67-7	D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Titanium dioxide, mixture containing on Health Canada's WHMIS Division website.)
• Aluminum oxide	1344-28-1	Uncontrolled product according to WHMIS classification criteria
• Cristobalite	14464-46-1	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.)
• 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
• Zirconium oxide	1314-23-4	Uncontrolled product according to WHMIS classification criteria
• Quartz	14808-60-7	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.)
• 1-Propene, homopolymer	9003-07-0	Uncontrolled product according to WHMIS classification criteria
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

**Canada - WHMIS 1988 - Ingredient Disclosure List**

• Calcium Aluminate	<i>Proprietary</i>	Not Listed
• Potassium oxide	12136-45-7	Not Listed
• Mullite	1302-93-8	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 %
• Titanium dioxide	13463-67-7	Not Listed
• Aluminum oxide	1344-28-1	1 %
• Cristobalite	14464-46-1	1 %
• Silica, amorphous	7631-86-9	1 %
• Amorphous/fused silica	60676-86-0	1 %
• Zirconium oxide	1314-23-4	Not Listed
• Quartz	14808-60-7	1 %
• 1-Propene, homopolymer	9003-07-0	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

## United States

### Environment

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

• Calcium Aluminate	<i>Proprietary</i>	Not Listed
• Potassium oxide	12136-45-7	Not Listed
• Mullite	1302-93-8	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
• Titanium dioxide	13463-67-7	Not Listed
• Aluminum oxide	1344-28-1	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Silica, amorphous	7631-86-9	Not Listed
• Amorphous/fused silica	60676-86-0	Not Listed
• Zirconium oxide	1314-23-4	Not Listed
• Quartz	14808-60-7	Not Listed
• 1-Propene, homopolymer	9003-07-0	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

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

• Calcium Aluminate	<i>Proprietary</i>	Not Listed
• Potassium oxide	12136-45-7	Not Listed
• Mullite	1302-93-8	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
• Titanium dioxide	13463-67-7	Not Listed
• Aluminum oxide	1344-28-1	1.0 % de minimis concentration (fibrous forms)
• Cristobalite	14464-46-1	Not Listed
• Silica, amorphous	7631-86-9	Not Listed
• Amorphous/fused silica	60676-86-0	Not Listed
• Zirconium oxide	1314-23-4	Not Listed
• Quartz	14808-60-7	Not Listed
• 1-Propene, homopolymer	9003-07-0	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

## United States - California

### Environment

#### U.S. - California - Proposition 65 - Carcinogens List

• Calcium Aluminate	<i>Proprietary</i>	Not Listed
• Potassium oxide	12136-45-7	Not Listed
• Mullite	1302-93-8	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
• Titanium dioxide	13463-67-7	carcinogen, 9/2/2011 (airborne, unbound particles of

• Aluminum oxide	1344-28-1	respirable size) Not Listed
• Cristobalite	14464-46-1	Not Listed
• Silica, amorphous	7631-86-9	Not Listed
• Amorphous/fused silica	60676-86-0	Not Listed
• Zirconium oxide	1314-23-4	Not Listed
• Quartz	14808-60-7	Not Listed
• 1-Propene, homopolymer	9003-07-0	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

## United States - Pennsylvania

### Labor

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

• Calcium Aluminate	<i>Proprietary</i>	Not Listed
• Potassium oxide	12136-45-7	Not Listed
• Mullite	1302-93-8	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	
• Titanium dioxide	13463-67-7	Not Listed
• Aluminum oxide	1344-28-1	
• Cristobalite	14464-46-1	Not Listed
• Silica, amorphous	7631-86-9	Not Listed
• Amorphous/fused silica	60676-86-0	Not Listed
• Zirconium oxide	1314-23-4	Not Listed
• Quartz	14808-60-7	Not Listed
• 1-Propene, homopolymer	9003-07-0	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

## Other Information

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

## Section 16 - Other Information

<b>Revision Date</b>	• 04/January/2018
<b>Last Revision Date</b>	• 04/January/2018
<b>Preparation Date</b>	• 04/January/2018
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### Key to abbreviations

NDA = No data available