Safety Data Sheet

DONCASTERS

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **Ceramic Stud Welding Ferrule**

Synonyms • Ceramic Ferrule

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

Relevant identified use(s) • Ferrule used in stud welding

1.3 Details of the supplier of the safety data sheet

Manufacturer • Nelson Stud Weld & Doncasters Company
7900 West Ridge Road
PO Box 4019 Elyria, OH 44036
United States
www.Doncasters.com

Telephone (General) • 440-329-0400

1.4 Emergency telephone number

Manufacturer • 440-329-0400

Manufacturer • 800-262-8200 - CHEMTREC

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

2.1 Classification of the substance or mixture

CLP • Eye Irritation 2 - H319
Germ Cell Mutagenicity 2 - H341
Carcinogenicity 1A - H350i
Specific Target Organ Toxicity Repeated Exposure 1 - H372

2.2 Label Elements

CLP

DANGER

Hazard statements
- H319 - Causes serious eye irritation
  H341 - Suspected of causing genetic defects.
  H350i - May cause cancer by inhalation.
  H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention
- P201 - Obtain special instructions before use.
  P202 - Do not handle until all safety precautions have been read and understood.
  P260 - Do not breathe dust.
  P264 - Wash thoroughly after handling.
  P270 - Do not eat, drink or smoke when using this product.
  P280 - Wear protective gloves/protective clothing/eye protection/face protection.
  P281 - Use personal protective equipment as required.

Response
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P337+P313 - If eye irritation persists: Get medical advice/attention.
  P308+P313 - IF exposed or concerned: Get medical advice/attention.
  P314 - Get medical advice/attention if you feel unwell.

Storage/Disposal
- P405 - Store locked up.
  P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

CLP
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

UN GHS Revision 3

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Third Revised Edition

2.1 Classification of the substance or mixture

UN GHS
- Skin Mild Irritation 3
  Eye Mild Irritation 2B
  Germ Cell Mutagenicity 2
  Carcinogenicity 1A
  Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

UN GHS

DANGER

Hazard statements
- Causes mild skin irritation
  Causes eye irritation
  Suspected of causing genetic defects.
  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 personal protective equipment as required.

Response • 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.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.

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

2.3 Other hazards

UN GHS • According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous

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United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Eye Mild Irritation 2B
Germ Cell Mutagenicity 2
Carcinogenicity 1A
Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements • Causes eye irritation
Suspected of causing genetic defects.
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.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.

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

2.3 Other hazards

OSHA HCS 2012 • Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	**Identifiers**	**%**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Quartz	**CAS:**14808-60-7 **EC Number:**238-878-4	20.2% TO 100%	NDA	**EU CLP:** Carc. 1A, H350i; STOT RE 1, H372 (Lungs, Inhl) **UN GHS Revision 3:** Carc. 1A; STOT RE 1 (Lungs, Inhl) **OSHA HCS 2012:** Carc. 1A; STOT RE 1 (Lungs, Inhl)	NDA
Aluminum oxide	**CAS:**1344-28-1 **EC Number:**215-691-6	46.37% TO 70.8%	Inhalation-Rat LC50 • 0.2 mg/L 5 Hour(s) 28 Week(s)	**EU CLP:** STOT RE 2 (Lungs, Inhl), H373 **UN GHS Revision 3:** STOT RE 2 (Lungs, Inhl) **OSHA HCS 2012:** STOT RE 2 (Lungs, Inhl)	NDA
Wollastonite	**CAS:**13983-17-0 **EC Number:**237-772-5	45% TO 67%	NDA	**EU CLP:** Not Classified **UN GHS Revision 3:** Not Classified **OSHA HCS 2012:** Not Classified	NDA
Stearic acid, calcium salt	**CAS:**1592-23-0 **EINECS:**216-472-8	45% TO 67%	Ingestion/Oral-Rat LD50 • >10 g/kg	**EU CLP:** Not Classified **UN GHS Revision 3:** Not Classified **OSHA HCS 2012:** Not Classified	NDA
Calcium salt of polymerized arylalkyl-sulfonic acids	**CAS:**8061-52-7	45% TO 67%	NDA	**EU CLP:** Not Classified **UN GHS Revision 3:** Not Classified **OSHA HCS 2012:** Not Classified	NDA
Pyrophyllite (Al2O3)(4SiO)(2H2O)	**CAS:**12269-78-2	18% TO 33.5%	NDA	**EU CLP:** Not Classified **UN GHS Revision 3:** Not Classified **OSHA HCS 2012:** Not Classified	NDA
Talc	**CAS:**14807-96-6 **EC Number:**238-877-9	28% TO 32.0005%	NDA	**EU CLP:** STOT RE 1, H372 (Lungs, Inhl) **UN GHS Revision 3:** STOT RE 1 (Lungs, Inhl); Skin Irrit. 3 **OSHA HCS 2012:** STOT RE 1 (Lungs, Inhl)	NDA
Kaolin	**CAS:**1332-58-7	2.25% TO 10.05%	NDA	**EU CLP:** Eye Irrit. 2, H319; STOT RE 1, H372 **UN GHS Revision 3:** Eye Irrit. 2B; STOT RE 1 (Lungs) **OSHA HCS 2012:** Eye Irrit. 2B; STOT RE 1 (Lungs)	NDA
Silicate, mica	**CAS:**12001-26-2	0.45% TO 2.01%	NDA	**EU CLP:** STOT RE 1, H372 **UN GHS Revision 3:** STOT RE 1 (Lung, Liver, Inhl) **OSHA HCS 2012:** STOT RE 1 (Lung, Liver, Inhl)	NDA
Titanium dioxide	**CAS:**13463-67-7 **EC Number:**236-675-5	< 2.01%	NDA	**EU CLP:** Muta. 2, H341; Carc. 2, H351; STOT RE 2 (Lungs), H373 **UN GHS Revision 3:** Skin Irrit. 3; Muta. 2; Carc. 2; STOT RE 2 (Lungs); Aquatic Chronic 4	NDA

				OSHA HCS 2012: Muta. 2; Carc. 2; STOT RE 2 (Lungs)	

See Section 16 for full text of H-statements.

Section 4 - First Aid Measures

4.1 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.

Skin • Wash skin with soap and water. Remove clothing and wash thoroughly before use. If irritation develops and persists, get medical attention.

Eye • In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. Get medical attention.

Ingestion • Not expected to be an important route of entry into the body. If entire ferrules or large fragments are ingested, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

4.3 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 materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO_2, water spray or regular foam.

Unsuitable Extinguishing Media • No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • This product is non-combustible and does not present a fire hazard.

Hazardous Combustion Products • No data available

5.3 Advice for firefighters

• Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures • Eliminate all ignition sources. As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. Keep unauthorized personnel away.

6.2 Environmental precautions

• Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Avoid generating dust.

SMALL DRY SPILLS: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.
LARGE SPILLS: Cover powder spill with plastic sheet or tarp to minimize spreading.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only with adequate ventilation. Minimize dust generation and accumulation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust or fumes. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container closed. Store in a cool, dry, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines					
	Result	**ACGIH**	**NIOSH**	**OSHA**	**United Kingdom**
Silicate, mica (12001-26-2)	STELs	Not established	Not established	Not established	30 mg/m3 STEL (calculated, total inhalable); 2.4 mg/m3 STEL (calculated, respirable)
	TWAs	3 mg/m3 TWA (respirable fraction)	3 mg/m3 TWA (containing <1% Quartz, respirable dust)	Not established	10 mg/m3 TWA (total inhalable); 0.8 mg/m3 TWA (respirable)
Titanium dioxide (13463-67-7)	STELs	Not established	Not established	Not established	30 mg/m3 STEL (calculated, total inhalable); 12 mg/m3 STEL (calculated, respirable)
	TWAs	10 mg/m3 TWA	Not established	15 mg/m3 TWA (total dust)	10 mg/m3 TWA (total inhalable); 4 mg/m3 TWA (respirable)
Kaolin (1332-58-7)	STELs	Not established	Not established	Not established	6 mg/m3 STEL (calculated, respirable dust)
	TWAs	2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	2 mg/m3 TWA (respirable dust)
Quartz (14808-60-7)	STELs	Not established	Not established	Not established	0.3 mg/m3 STEL (calculated, respirable)
	TWAs	0.025 mg/m3 TWA (respirable fraction)	0.05 mg/m3 TWA (respirable dust)	Not established	0.1 mg/m3 TWA (respirable)
Talc (14807-96-6)	STELs	Not established	Not established	Not established	3 mg/m3 STEL (calculated, respirable dust)

	TWAs	2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	2 mg/m3 TWA (containing no Asbestos and <1% Quartz, respirable dust)	Not established	1 mg/m3 TWA (respirable dust)
Aluminum oxide (1344-28-1)	TWAs	1 mg/m3 TWA (respirable fraction) *as Aluminum insoluble compounds*	Not established	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	Not established

8.2 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. 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).

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 safety goggles.

Skin/Body

- Wear appropriate gloves.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration
STEL = Short Term Exposure Limits are based on 15-minute exposures
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Tan ceramic shapes, various sizes.
Color	Tan	Odor	Data lacking
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	2800 °F(1537.7778 °C)
Decomposition Temperature	2800 °F(1537.7778 °C)	pH	Data lacking
Specific Gravity/Relative Density	= 2 Water=1	Water Solubility	Insoluble
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking	Volatiles (Wt.)	0 %
Volatiles (Vol.)	0 %		

Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization not indicated.

10.4 Conditions to avoid

- Avoid generating dust.

10.5 Incompatible materials

- Hydrofluoric acid.

10.6 Hazardous decomposition products

- None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Talc (28% TO 32.0005%)	14807-96-6	**Irritation:** Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; **Tumorigen / Carcinogen:** Inhalation-Rat TCLo • 18 mg/m³ 6 Hour(s) 2 Year(s)-Intermittent; *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Lungs, Thorax, or Respiration*:**Bronchiogenic carcinoma**; *Endocrine*:**Tumors**
Quartz (20.2% TO 100%)	14808-60-7	**Acute Toxicity:** Inhalation-Human TCLo • 16 mppcf 8 Hour(s) 17.9 Year(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Fibrosis, focal (pneumoconiosis)**; *Lungs, Thorax, or Respiration*:**Cough**; *Lungs, Thorax, or Respiration*:**Dyspnea**; Inhalation-Rat TCLo • 200 mg/kg; *Lungs, Thorax, or Respiration*:**Fibrosis, focal (pneumoconiosis)**; *Lungs, Thorax, or Respiration*:**Other changes**; *Nutritional and Gross Metabolic:Changes in Chemistry or Temperature*:**Fe**; **Multi-dose Toxicity:** Inhalation-Hamster TCLo • 3 mg/m³ 6 Hour(s) 78 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Fibrosis (interstitial)**; *Lungs, Thorax, or Respiration*:**Changes in lung weight**; Inhalation-Rat TCLo • 6.2 mg/m³ 6 Hour(s) 6 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Other changes**; *Blood*:**Changes in spleen**; *Immunological Including Allergic*:**Increase in cellular immune response**; Inhalation-Rat TCLo • 80 mg/m³ 26 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Fibrosis, focal (pneumoconiosis)**; *Blood*:**Changes in spleen**; *Immunological Including Allergic*:**Decrease in cellular immune response**; **Mutagen:** Micronucleus test • Unreported Route-Hamster • Lung (Somatic cell) • 160 µg/cm³; DNA damage • Unreported Route-Human • Other Cell Type • 120 mg/L 24 Hour(s); Micronucleus test • Unreported Route-Human • Lung (Somatic cell) • 40 µg/cm³; **Tumorigen / Carcinogen:** Inhalation-Rat TCLo • 50 mg/m³ 6 Hour(s) 71 Week(s)-Intermittent; *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Liver*:**Tumors**
Aluminum oxide (46.37% TO 70.8%)	1344-28-1	**Multi-dose Toxicity:** Inhalation-Rat TCLo • 200 mg/m³ 5 Hour(s) 28 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Structural or functional change in trachea or bronchi**; *Lungs, Thorax, or Respiration*:**Chronic pulmonary edema**; *Related to Chronic Data*:**Death in the Other Multiple Dose data type field**; **Tumorigen / Carcinogen:** Implant-Rat • 200 mg/kg; *Tumorigenic*:**Equivocal tumorigenic agent by RTECS**

		criteria; *Tumorigenic*:**Tumors at site of application**; Implant-Rat TDLo • 200 mg/kg; *Tumorigenic*:**Neoplastic by RTECS criteria**; *Tumorigenic*:**Tumors at site of application**; Intrapleural-Rat TDLo • 90 mg/kg; *Tumorigenic*:**Equivocal tumorigenic agent by RTECS criteria**; *Lungs, Thorax, or Respiration*:**Tumors**
Titanium dioxide (< 2.01%)	13463-67-7	**Irritation:** Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; **Multi-dose Toxicity:** Inhalation-Rat TCLo • 10 mg/m³ 6 Hour(s) 13 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Fibrosis (interstitial)**; *Lungs, Thorax, or Respiration*:**Other changes**; *Biochemical:Metabolism (intermediary)*:**Effect on inflammation or mediation of inflammation**; Inhalation-Rat TCLo • 250 mg/m³ 6 Hour(s) 4 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Chronic pulmonary edema**; *Lungs, Thorax, or Respiration*:**Other changes**; **Mutagen:** Micronucleus test • Ingestion/Oral-Mouse • 280 mg/kg 7 Day(s)-Intermittent; DNA damage • Ingestion/Oral-Mouse • 280 mg/kg 7 Day(s)-Intermittent; Cytogenetic analysis • Ingestion/Oral-Mouse • 280 mg/kg 7 Day(s)-Intermittent; **Tumorigen / Carcinogen:** Inhalation-Rat • 10 mg/m³ 18 Hour(s) 2 Year(s)-Intermittent; *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Lungs, Thorax, or Respiration*:**Tumors**; Inhalation-Rat TCLo • 250 mg/m³ 6 Hour(s) 2 Year(s)-Intermittent; *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Lungs, Thorax, or Respiration*:**Tumors**
Stearic acid, calcium salt (45% TO 67%)	1592-23-0	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • >10 g/kg
Kaolin (2.25% TO 10.05%)	1332-58-7	**Multi-dose Toxicity:** Inhalation-Hamster TCLo • 30 mg/m³ 48 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Fibrosis (interstitial)**; *Lungs, Thorax, or Respiration*:**Tumors**; Inhalation-Rat TCLo • 30 mg/m³ 72 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Tumors**; **Reproductive:** Ingestion/Oral-Rat TDLo • 590 g/kg (37D pre/1-22D preg); *Reproductive Effects:Effects on Newborn*:**Growth statistics (e.g., reduced weight gain)**; Ingestion/Oral-Rat TDLo • 370 g/kg (37D pre/1-22D preg); *Reproductive Effects:Maternal Effects*:**Other effects**; *Reproductive Effects:Effects on Newborn*:**Other neonatal measures or effects.**
Wollastonite (45% TO 67%)	13983-17-0	**Acute Toxicity:** Intratracheal-Rat TDLo • 4.8 mg/kg; *Lungs, Thorax, or Respiration*:**Structural or functional change in trachea or bronchi**; *Lungs, Thorax, or Respiration*:**Fibrosis (interstitial)**; *Biochemical:Metabolism (intermediary)*:**Effect on inflammation or mediation of inflammation**; **Tumorigen / Carcinogen:** Implant-Rat TDLo • 200 mg/kg; *Tumorigenic*:**Equivocal tumorigenic agent by RTECS criteria**; *Tumorigenic*:**Tumors at site of application**

GHS Properties	Classification
Acute toxicity	**EU/CLP•**Data lacking **UN GHS 3•**Data lacking **OSHA HCS 2012•**Data lacking
Skin corrosion/Irritation	**EU/CLP•**Data lacking **UN GHS 3•**Skin Mild Irritation 3 **OSHA HCS 2012•**Data lacking
Serious eye damage/Irritation	**EU/CLP•**Eye Irritation 2 **UN GHS 3•**Eye Mild Irritation 2B **OSHA HCS 2012•**Eye Mild Irritation 2B
Skin sensitization	**EU/CLP•**Data lacking **UN GHS 3•**Data lacking **OSHA HCS 2012•**Data lacking
Respiratory sensitization	**EU/CLP•**Data lacking **UN GHS 3•**Data lacking **OSHA HCS 2012•**Data lacking
Aspiration Hazard	**EU/CLP•**Data lacking **UN GHS 3•**Data lacking **OSHA HCS 2012•**Data lacking
Carcinogenicity	**EU/CLP•**Carcinogenicity 1A **UN GHS 3•**Carcinogenicity 1A **OSHA HCS 2012•**Carcinogenicity 1A
Germ Cell Mutagenicity	**EU/CLP•**Germ Cell Mutagenicity 2 **UN GHS 3•**Germ Cell Mutagenicity 2 **OSHA HCS 2012•**Germ Cell Mutagenicity 2

Toxicity for Reproduction	**EU/CLP**•Data lacking **UN GHS 3**•Data lacking **OSHA HCS 2012**•Data lacking
STOT-SE	**EU/CLP**•Data lacking **UN GHS 3**•Data lacking **OSHA HCS 2012**•Data lacking
STOT-RE	**EU/CLP**•Specific Target Organ Toxicity Repeated Exposure 1 **UN GHS 3**•Specific Target Organ Toxicity Repeated Exposure 1 **OSHA HCS 2012**•Specific Target Organ Toxicity Repeated Exposure 1

Potential Health Effects

Inhalation

Acute (Immediate)
- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)
- Repeated and prolonged exposure to dust may cause lung effects including pneumoconiosis. Repeated and prolonged exposure may affect the liver.

Skin

Acute (Immediate)
- Causes mild skin irritation.

Chronic (Delayed)
- No data available

Eye

Acute (Immediate)
- Causes serious eye irritation. 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
- Repeated and prolonged exposure to fumes and dust created in processing this product may cause cancer.

Carcinogenic Effects			
	CAS	**IARC**	**NTP**
Titanium dioxide	13463-67-7	Group 2B-Possible Carcinogen	Not Listed
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen

Reproductive Effects • Repeated and prolonged exposure may cause reproductive effects.

Key to abbreviations

LD = Lethal Dose
TC = Toxic Concentration
TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

- The product is not expected to present an environmental hazard.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 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

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Data lacking.

Section 15 - Regulatory Information

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

SARA Hazard Classifications • Chronic

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**EU EINECS**	**EU ELNICS**	**TSCA**
Aluminum oxide	1344-28-1	Yes	No	Yes	No	Yes
Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Yes	No	No	No	Yes
Kaolin	1332-58-7	Yes	No	Yes	No	Yes
Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	No	No	No	No	No
Quartz	14808-60-7	Yes	No	Yes	No	Yes
Silicate, mica	12001-26-2	Yes	No	No	No	No

Stearic acid, calcium salt	1592-23-0	Yes	No	Yes	No	Yes
Talc	14807-96-6	Yes	No	Yes	No	Yes
Titanium dioxide	13463-67-7	Yes	No	Yes	No	Yes
Wollastonite	13983-17-0	No	No	Yes	No	No

Canada

Labor

Canada - WHMIS - Classifications of Substances

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Uncontrolled product according to WHMIS classification criteria
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	D2A
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Uncontrolled product according to WHMIS classification criteria (containing <1% Quartz)
•Talc	14807-96-6	D2A
•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
•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.)

Canada - WHMIS - Ingredient Disclosure List

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	1 %
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	1 %
•Quartz	14808-60-7	1 %

Environment

Canada - CEPA - Priority Substances List

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed

•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed

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

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed

•Quartz	14808-60-7	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	1.0 % de minimis concentration (fibrous forms)
•Quartz	14808-60-7	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	carcinogen, 9/2/2011 (airborne, unbound particles of respirable size)
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	carcinogen, 10/1/1988 (airborne particles of respirable size)

U.S. - California - Proposition 65 - Developmental Toxicity		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
•Wollastonite	13983-17-0	Not Listed
•Stearic acid, calcium salt	1592-23-0	Not Listed
•Calcium salt of polymerized arylalkyl-sulfonic acids	8061-52-7	Not Listed
•Kaolin	1332-58-7	Not Listed
•Pyrophyllite (Al2O3)(4SiO)(2H2O)	12269-78-2	Not Listed
•Silicate, mica	12001-26-2	Not Listed
•Talc	14807-96-6	Not Listed
•Titanium dioxide	13463-67-7	Not Listed
•Aluminum oxide	1344-28-1	Not Listed
•Quartz	14808-60-7	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

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

Section 16 - Other Information

Relevant Phrases (code & full text)

- H351 - Suspected of causing cancer.
  H373 - May cause damage to organs through prolonged or repeated exposure.

Revision Date

- 27/April/2016

Preparation Date

- 01/August/1999

Disclaimer/Statement of Liability

- The information herein is given in good faith but no warranty, expressed or implied, is made.

Key to abbreviations

NDA = No Data Available