Safety Data Sheet

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

1.1 Product identifier

Product Name • **MK1107**

Synonyms • Firefrax #1-F

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

Relevant identified use(s) • Mix, Mortar Cement

Use(s) advised against • When dust is generated, keep below PEL/TLV Levels

1.3 Details of the supplier of the safety data sheet

Manufacturer • SAINT-GOBAIN CERAMICS & PLASTICS, INC.
1 New Bond Street
Worcester, MA 01606
United States
www.ceramicmaterials.saint-gobain.com

Telephone (General) • 1 (508) 795-5000

1.4 Emergency telephone number

Manufacturer • 1 (508) 795-5000

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

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

DSD/DPD • Toxic (T)
Irritant (Xi)
Harmful (Xn)
Carcinogenic Substances - Category 1
Mutagenic Substances - Category 3
R36, R45, R48, R48/23

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.
  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.

Storage/Disposal

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

DSD/DPD

Risk phrases

- R36 - Irritating to eyes.
  R45 - May cause cancer.
  R48 - Danger of serious damage to health by prolonged exposure.
  R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases

- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  S37 - Wear suitable gloves.
  S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  S53 - Avoid exposure - obtain special instructions before use.

2.3 Other Hazards

CLP

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

DSD/DPD

- According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Eye Irritation 2
  Germ Cell Mutagenicity 2
  Carcinogenicity 1A
  Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements

- Causes serious 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, clothing , and eye/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**
Aluminum(III) silicate (2:1)	**CAS:**1302-76-7 **EINECS:**215-106-4	34% TO 66.5%	NDA	**EU DSD/DPD:** Not Classified **EU CLP:** Not Classified **OSHA HCS 2012:** Not Classified	NDA
Kaolin	**CAS:**1332-58-7	9.5% TO 19.6%	NDA	**EU DSD/DPD:** T, R48/23; Xi, R36; **EU CLP:** Eye Irrit. 2, H319; STOT RE 1, H372 **OSHA HCS 2012:** Eye Irrit. 2B; STOT RE 1 (Lungs)	NDA
Sodium silicate	**CAS:**1344-09-8 **EC Number:**215-687-4	2% TO 9.8%	Ingestion/Oral-Rat LD50 • 1960 mg/kg Skin-Rabbit LD50 • >4640 mg/kg	**EU DSD/DPD:** Xi; R36/37/38; N; R50 **EU CLP:** Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Acute 1, H400 **OSHA HCS 2012:** Skin Irrit. 2; Eye Irrit. 2; STOT SE 3: Resp. Irrit.	NDA
				EU DSD/DPD: Carc. Cat. 1; T; R45; R48/23	

Quartz	**CAS:**14808-60-7 **EC Number:**238-878-4	2.014% TO 7.028%	NDA	**EU CLP:** Carc. 1A, H350i; STOT RE 1 (Lungs, Inhl), H372 **OSHA HCS 2012:** Carc. 1A; STOT RE 1 (Lungs, Inhl)	NDA
Titanium dioxide	**CAS:**13463-67-7 **EC Number:**236-675-5	0.4% TO 3.5%	NDA	**EU DSD/DPD:** Mut. Cat. 3, Xn, R68; Carc. Cat. 3, Xn, R40 **EU CLP:** Muta. 2, H341; Carc. 2, H351; STOT RE 2, H373 **OSHA HCS 2012:** Muta. 2; Carc. 2; STOT RE 2 (Lungs)	NDA
Silicate, mica	**CAS:**12001-26-2	0.1% TO 0.6%	NDA	**EU DSD/DPD:** T; R48/23 **EU CLP:** STOT RE 1, H372 **OSHA HCS 2012:** STOT RE 1 (Lung, Liver, Inhl)	NDA
Cristobalite	**CAS:**14464-46-1 **EC Number:**238-455-4	< 0.07%	NDA	**EU CLP:** Community workplace exposure limit **OSHA HCS 2012:** Exposure limits	NDA

See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 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. If signs/symptoms continue, get medical attention.

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

Ingestion
- Rinse mouth. Do not give anything by mouth to an unconscious person. Get 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
- No specific actions or treatments recommended related to exposure to this material.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- Not combustible. Use extinguishing media suitable for surrounding fire.

Unsuitable Extinguishing Media
- None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- None known.

Hazardous Combustion Products
- No data available

5.3 Advice for firefighters

- Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.
  Fire fighters should avoid inhaling any combustion products.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Take proper precautions to minimize exposure by using appropriate personal protective equipment.

Emergency Procedures

- Stay upwind. As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away.

6.2 Environmental precautions

- Avoid release to the environment.

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. When dust is generated, keep dust below PEL/TLV levels. See 05HA 29CFR 1910.1000 (Air Contaminants) and 29CFR 1910.94 (Ventilation). Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. 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

- Store in a well-ventilated place. Keep container tightly closed.

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**
Cristobalite (14464-46-1)	TWAs	0.025 mg/m3 TWA (respirable fraction)	0.05 mg/m3 TWA (respirable dust)	Not established
Silicate, mica (12001-26-2)	TWAs	3 mg/m3 TWA (respirable fraction)	3 mg/m3 TWA (containing <1% Quartz, respirable dust)	Not established
Titanium dioxide (13463-67-7)	TWAs	10 mg/m3 TWA	Not established	15 mg/m3 TWA (total dust)
Quartz (14808-60-7)	TWAs	0.025 mg/m3 TWA (respirable fraction)	0.05 mg/m3 TWA (respirable dust)	Not established
Kaolin (1332-58-7)	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)

Exposure Limits Supplemental

OSHA

•Silicate, mica (12001-26-2): **Mineral Dusts:** (20 mppcf TWA (<1% Crystalline silica))

•Quartz (14808-60-7): **Mineral Dusts:** ((30)/(%SiO2 + 2) mg/m3 TWA, total dust; (250)/(%SiO2 + 5) mppcf TWA, respirable fraction; (10)/(%SiO2 + 2) mg/m3 TWA, respirable fraction)

•Cristobalite (14464-46-1): **Mineral Dusts:** ((1/2)(30)/(%SiO2 + 2) mg/m3 TWA, total dust; (1/2)(250)/(%SiO2 + 5) mppcf TWA, respirable fraction; (1/2)(10)/(%SiO2 + 2) mg/m3 TWA, respirable fraction)

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. Wear long sleeves and/or protective coveralls.

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
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	Granular material.
Color	Data lacking	Odor	Data lacking
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point	1750 C(3182 F)
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	= 2.5	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
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

- None

10.5 Incompatible materials

- None

10.6 Hazardous decomposition products

- At high temperature steam may be released.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Kaolin (9.5% TO 19.6%)	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**; Inhalation-Rat TCLo • 30 mg/m³ 96 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Other changes**; *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.**
Quartz (2.014% TO 7.028%)	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**
		Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation;

Titanium dioxide (0.4% TO 3.5%)	13463-67-7	**Multi-dose Toxicity:** 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**; 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**; **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**
Sodium silicate (2% TO 9.8%)	1344-09-8	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1960 mg/kg; Skin-Rabbit LD50 • >4640 mg/kg; *Behavioral*:**Somnolence (general depressed activity)**; *Lungs, Thorax, or Respiration*:**Dyspnea**; **Irritation:** Eye-Rabbit • 10 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Severe irritation

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Aspiration Hazard	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Carcinogenicity	**EU/CLP** • Carcinogenicity 1A **OSHA HCS 2012** • Carcinogenicity 1A
Germ Cell Mutagenicity	**EU/CLP** • Germ Cell Mutagenicity 2 **OSHA HCS 2012** • Germ Cell Mutagenicity 2
Skin corrosion/Irritation	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Skin sensitization	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
STOT-RE	**EU/CLP** • Specific Target Organ Toxicity Repeated Exposure 1 **OSHA HCS 2012** • Specific Target Organ Toxicity Repeated Exposure 1
STOT-SE	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Toxicity for Reproduction	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Respiratory sensitization	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Serious eye damage/Irritation	**EU/CLP** • Eye Irritation 2 **OSHA HCS 2012** • Eye Irritation 2

Potential Health Effects

Inhalation

Acute (Immediate)
- Exposure to dust may cause irritation.

Chronic (Delayed)
- Chronic overexposure to dusts of this material in excess of published exposure limits may cause lung damage/disease, including decreased lung function.

Skin

Acute (Immediate)
- Exposure to dust may cause mechanical 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.

Mutagenic Effects
- Repeated and prolonged exposure may cause mutagenic effects.

Carcinogenic Effects
- Repeated and prolonged exposure may cause cancer. This material may contain titanium dioxide. The International Agency for Research on Cancer (IARC) lists titanium dioxide as a Group 2B - Possible Carcinogen. This product contains crystalline silica as cristobalite and/or quartz. IARC Monographs on Evaluation of Carcinogenic Risk of Chemicals to Humans (Monograph 68, 1997) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to humans (IARC Group I). Crystalline Silica is classified as a Known Carcinogen according to NTP.

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

Key to abbreviations

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

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
- Acute, Chronic

Inventory				
Component	**CAS**	**EU EINECS**	**EU ELNICS**	**TSCA**
Aluminum(III) silicate (2:1)	1302-76-7	Yes	No	No
Cristobalite	14464-46-1	Yes	No	Yes
Kaolin	1332-58-7	Yes	No	Yes
Quartz	14808-60-7	Yes	No	Yes
Silicate, mica	12001-26-2	No	No	No
Sodium silicate	1344-09-8	Yes	No	Yes
Titanium dioxide	13463-67-7	Yes	No	Yes

United States

Labor

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

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed

• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

Environment

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

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

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

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

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

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

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

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed

• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

United States - California

Environment

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

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	carcinogen, initial date 9/2/11 (airborne, unbound particles of respirable size)
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	carcinogen, initial date 10/1/88 (airborne particles of respirable size)
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed

• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Kaolin	1332-58-7	Not Listed
• Silicate, mica	12001-26-2	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Cristobalite	14464-46-1	Not Listed
• Sodium silicate	1344-09-8	Not Listed
• Quartz	14808-60-7	Not Listed
• Aluminum(III) silicate (2:1)	1302-76-7	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)

- H315 - Causes skin irritation
  H335 - May cause respiratory irritation
  H351 - Suspected of causing cancer.
  H373 - May cause damage to organs through prolonged or repeated exposure.
  H400 - Very toxic to aquatic life

  R36/37/38 - Irritating to eyes, respiratory system and skin.
  R40 - Limited evidence of a carcinogenic effect.
  R50 - Very toxic to aquatic organisms.
  R68 - Possible risk of irreversible effects.

Last Revision Date
- 10/April/2015

Preparation Date
- 10/April/2015

Disclaimer/Statement of Liability
- Reasonable care has been taken in the preparation of this information, but the supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product.

Key to abbreviations

NDA = No data available