

Safety Data Sheet

GenFlex Roofing Systems

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

1.1 Product identifier

Product Name • EZ TPO Edge Caulk LVOC

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

Relevant identified use(s) • Sealant

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company
250 West 96th Street
Indianapolis, IN 46260
United States

genflexmsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

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 • Flammable Solids 1 - H228
Skin Irritation 2 - H315
Eye Irritation 2 - H319
Specific Target Organ Toxicity Repeated Exposure 2 - H373

2.2 Label Elements

CLP

DANGER

Hazard statements • H228 - Flammable solid
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention • P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
P240 - Ground and/or bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
P264 - Wash thoroughly after handling.

- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response** • P370+P378 - In case of fire: Use appropriate media for extinction.
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 P321 - Specific treatment, see supplemental first aid information.
 P362 - Take off contaminated clothing and wash before reuse.
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 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.
 P314 - Get medical advice/attention if you feel unwell.
- Storage/Disposal** • 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.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Flammable Solids 1
 - Skin Irritation 2
 - Eye Irritation 2A
 - Reproductive Toxicity 2
 - Specific Target Organ Toxicity Repeated Exposure 2

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • Flammable solid
 Causes skin irritation
 Causes serious eye irritation
 Suspected of damaging fertility or the unborn child.
 May cause 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.
 Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 Ground and/or bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Do not breathe mist/vapours/spray.
 Wash thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
- Response** • In case of fire: Use appropriate media for extinction.
 If on skin: Wash with plenty of water .
 Specific treatment, see supplemental first aid information.
 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.
 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** • 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.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Flammable Solids - B4
- Other Toxic Effects - D2B

2.2 Label elements

WHMIS



- Flammable Solids - B4
- Other Toxic Effects - D2B

2.3 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

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
Light aliphatic solvent naphtha	CAS:64742-89-8 EC Number:265-192-2 EU Index:649-267-00-0	5% TO 20%	NDA	EU CLP: Annex VI, Table 3.1: Carc. 1B, H350; Muta. 1B, H340; Asp. Tox. 1, H304 OSHA HCS 2012: Not Classified	Carcinogen and mutagen classifications listed on EU Annex VI don't apply as this component contains less than 0.1% benzene
Solvent naphtha (petroleum), medium aliph.	CAS:64742-88-7 EC Number:265-191-7 EU Index:649-405-00-X	2.5% TO 10%	NDA	EU CLP: Annex VI, Table 3.1: STOT RE 1 (CNS, Inhl), H372; Asp. Tox. 1, H304 OSHA HCS 2012: Flam. Liq. 3; Asp. Tox. 1; STOT RE 2; Repr. 2;	NDA

Titanium dioxide	CAS:13463-67-7 EC Number:236-675-5	<= 2.5%	NDA	EU CLP: Muta. 2, H341; Carc. 2, H351; STOT RE 2 (lungs), H373 OSHA HCS 2012: Muta. 2; Carc. 2; STOT RE 2 (Lungs)	NDA
Calcium oxide	CAS:1305-78-8 EC Number:215-138-9	<= 1%	NDA	EU CLP: Skin Corr. 1C, H314; Eye Dam. 1, H318 OSHA HCS 2012: Skin Corr. 1C; Eye Dam. 1	NDA
Quartz	CAS:14808-60-7 EC Number:238-878-4	<= 0.5%	NDA	EU CLP: Carc. 1A, H350i; STOT RE 1, H372 (Lungs, Inhl) OSHA HCS 2012: Carc. 1A; STOT RE 1 (Lungs, Inhl)	NDA

It is highly unlikely the powders and pigments compounded within this product would pose a hazardous risk from inhalation as they are no longer a respirable particulate. Exposure to these ingredients as used in sealants, putties, bedding compounds and other non-sprayable products is highly unlikely.

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 if symptoms occur.

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

- Get medical attention immediately.

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 • CO₂, extinguishing powder or water spray. Fight larger fires with water spray.

Unsuitable Extinguishing Media • No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- Flammable/combustible material. May be ignited by friction, heat, sparks or flames. Some may burn rapidly with flare burning effect. Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence. May re-ignite after fire is extinguished.

Hazardous Combustion Products

- Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

- Move containers from fire area if you can do it without risk. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Use only with adequate ventilation. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Avoid contact with skin, eyes, and clothing.

Emergency Procedures

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. 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. Stay upwind. Keep out of low areas.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- SMALL DRY SPILLS: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.
LARGE SPILLS: Wet down with water and dike for later disposal.

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

- Do not use in areas without adequate ventilation. Keep containers closed. Keep away from heat, sparks, and flame – No Smoking. All equipment used when handling the product must be grounded. Take precautionary measures against static charges. Do not use sparking tools. Wear appropriate personal protective equipment. Avoid contact with eyes, skin 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	Belgium	Canada Alberta	Canada British Columbia	Canada Manitoba
Quartz (14808-60-7)	TWAs	0.025 mg/m ³ TWA (respirable fraction)	0.1 mg/m ³ TWA (alveolar dust)	0.025 mg/m ³ TWA (respirable particulate)	0.025 mg/m ³ TWA (respirable)	0.025 mg/m ³ TWA (respirable fraction)
Calcium oxide (1305-78-8)	TWAs	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA
Titanium dioxide (13463-67-7)	TWAs	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA (total dust); 3 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario
Quartz (14808-60-7)	TWAs	0.1 mg/m ³ TWA (respirable fraction)	0.1 mg/m ³ TWA (respirable mass); 0.3 mg/m ³ TWA (total mass)	0.025 mg/m ³ TWA (respirable fraction)	0.1 mg/m ³ TWA (respirable mass); 0.3 mg/m ³ TWA (total mass)	0.10 mg/m ³ TWA (designated substances regulation, respirable, listed under Silica, crystalline)
Calcium oxide (1305-78-8)	TWAs	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA
	STELs	Not established	4 mg/m ³ STEL	Not established	4 mg/m ³ STEL	Not established
Titanium dioxide (13463-67-7)	TWAs	10 mg/m ³ TWA	5 mg/m ³ TWA (respirable mass); 10 mg/m ³ TWA (total mass)	10 mg/m ³ TWA	5 mg/m ³ TWA (respirable mass); 10 mg/m ³ TWA (total mass)	10 mg/m ³ TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Quebec	Canada Saskatchewan	Canada Yukon	Denmark	Germany DFG
Quartz (14808-60-7)	TWAs	0.1 mg/m ³ TWAEV (respirable dust)	0.05 mg/m ³ TWA (respirable fraction, listed under Silica - crystalline)	300 particle/mL TWA (listed under Silica)	0.3 mg/m ³ TWA (total); 0.1 mg/m ³ TWA (respirable)	Not established
Calcium oxide (1305-78-8)	TWAs	2 mg/m ³ TWAEV	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	Not established
	STELs	Not established	Not established	4 mg/m ³ STEL	Not established	Not established
	Ceilings	Not established	Not established	Not established	Not established	2 mg/m ³ Peak (inhalable fraction)
	MAKs	Not established	Not established	Not established	Not established	1 mg/m ³ TWA MAK (inhalable fraction)
Titanium dioxide (13463-67-7)	TWAs	10 mg/m ³ TWAEV (containing no Asbestos and <1% Crystalline silica, total dust)	10 mg/m ³ TWA	30 mppcf TWA (as Ti); 10 mg/m ³ TWA (as Ti)	6 mg/m ³ TWA (as Ti)	Not established
	STELs	Not established	Not established	20 mg/m ³ STEL (as Ti)	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Germany TRGS	NIOSH	OSHA		
Quartz (14808-60-7)	TWAs	Not established	0.05 mg/m ³ TWA (respirable dust)	Not established		
		1 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus)				

Calcium oxide (1305-78-8)	TWAs	can be excluded when AGW and BGW values are observed. Substance causing local effects, inhalable fraction, exposure factor 2)	2 mg/m3 TWA	5 mg/m3 TWA
Titanium dioxide (13463-67-7)	TWAs	Not established	Not established	15 mg/m3 TWA (total dust)

Exposure Control Notations

Germany DFG

- Titanium dioxide (13463-67-7): **Carcinogens:** (Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles))
- Quartz (14808-60-7): **Carcinogens:** (Category 1 (causes cancer in man, alveola fraction))

8.2 Exposure controls

Engineering Measures/Controls

- This material is designed to be used outdoors, in roofing applications. 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. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 certified respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear protective gloves and clothing .

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

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

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

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

NIOSH = National Institute of Occupational Safety and Health

TWAEV = Time-Weighted Average Exposure Value

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	White pasty solid with petroleum-like odor.
Color	White	Odor	Petroleum-like
Odor Threshold	Data lacking		
General Properties			
Boiling Point	131 °C(267.8 °F)	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Density	Data lacking
Bulk Density	1.42 g/cm ³	Water Solubility	Insoluble
Viscosity	> 20.5 Centistoke (cSt, cS) or mm ² /sec	Explosive Properties	Data lacking

Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	3.8 Air=1
Evaporation Rate	Data lacking	VOC (Vol.)	< 250 g/L
Flammability			
Flash Point	10 °C(50 °F)	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 will not occur.

10.4 Conditions to avoid

- Avoid flames, sparks, or other sources of ignition. Incompatible materials.

10.5 Incompatible materials

- Strong oxidizing agents.

10.6 Hazardous decomposition products

- None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Titanium dioxide (<= 2.5%)	13463 -67-7	<p>Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation;</p> <p>Multi-dose Toxicity: Inhalation-Rat TCLo • 10 mg/m³ 6 Hour(s) 13 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis (interstitial); Lungs, Thorax, or Respiration:Other changes; Biochemical:Metabolism (intermediary):Effect on inflammation or mediation of inflammation;</i> Inhalation-Rat TCLo • 250 mg/m³ 6 Hour(s) 4 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Chronic pulmonary edema; Lungs, Thorax, or Respiration:Other changes;</i></p> <p>Mutagen: Cytogenetic analysis • Ingestion/Oral-Mouse • 280 mg/kg 7 Day(s)-Intermittent; Micronucleus test • Ingestion/Oral-Mouse • 280 mg/kg 7 Day(s)-Intermittent; DNA damage • Ingestion/Oral-Mouse • 280 mg/kg 7 Day(s)-Intermittent;</p> <p>Tumorigen / Carcinogen: Inhalation-Rat • 10 mg/m³ 18 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors;</i> Inhalation-Rat TCLo • 250 mg/m³ 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</i></p>
		Multi-dose Toxicity: Inhalation-Mouse TCLo • 2200 mg/m ³ 6 Hour(s) 16 Day(s)-Intermittent; <i>Liver:Changes in liver</i>

Solvent naphtha (petroleum), medium aliph. (2.5% TO 10%)	64742-88-7	weight ; <i>Reproductive Effects:Paternal Effects:Spermatogenesis</i> ; Inhalation-Rat TClO • 550 mg/m ³ 6 Hour(s) 16 Day (s)-Intermittent; <i>Kidney, Ureter, and Bladder:Other changes in urine composition</i> ; <i>Kidney, Ureter, and Bladder:Changes in kidney weight</i> ; <i>Reproductive Effects:Paternal Effects:Spermatogenesis</i> ; Inhalation-Rat TClO • 550 mg/m ³ 91 Day(s)-Intermittent; <i>Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis)</i> ; <i>Kidney, Ureter, and Bladder:Other changes</i> ; Inhalation-Rat TClO • 550 mg/m ³ 6 Hour(s) 16 Day(s)-Intermittent; <i>Endocrine:Thyroid tumors</i>
Quartz (<= 0.5%)	14808-60-7	Acute Toxicity: Inhalation-Human TClO • 16 mppcf 8 Hour(s) 17.9 Year(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis)</i> ; <i>Lungs, Thorax, or Respiration:Cough</i> ; <i>Lungs, Thorax, or Respiration:Dyspnea</i> ; Inhalation-Rat TClO • 200 mg/kg; <i>Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis)</i> ; <i>Lungs, Thorax, or Respiration:Other changes</i> ; <i>Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Fe</i> ; Multi-dose Toxicity: Inhalation-Hamster TClO • 3 mg/m ³ 6 Hour(s) 78 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis (interstitial)</i> ; <i>Lungs, Thorax, or Respiration:Changes in lung weight</i> ; Inhalation-Rat TClO • 80 mg/m ³ 26 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis)</i> ; <i>Blood:Changes in spleen</i> ; <i>Immunological Including Allergic:Decrease in cellular immune response</i> ; Inhalation-Rat TClO • 6.2 mg/m ³ 6 Hour(s) 6 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Other changes</i> ; <i>Blood:Changes in spleen</i> ; <i>Immunological Including Allergic:Increase in cellular immune response</i> ; Mutagen: Micronucleus test • Unreported Route-Hamster • Lung (Somatic cell) • 160 µg/cm ³ ; DNA damage • Unreported Route-Human • Other Cell Type • 120 mg/L 24 Hour(s); Micronucleus test • Unreported Route-Human • Lung (Somatic cell) • 40 µg/cm ³ ; Tumorigen / Carcinogen: Inhalation-Rat TClO • 50 mg/m ³ 6 Hour(s) 71 Week(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria</i> ; <i>Liver:Tumors</i>

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

Potential Health Effects

Inhalation

Acute (Immediate)

- May cause respiratory irritation.

- Chronic (Delayed)**
- No data available
- Skin**
- Acute (Immediate)**
- Causes skin irritation.
- Chronic (Delayed)**
- No data available.
- Eye**
- Acute (Immediate)**
- Causes serious eye irritation.
- Chronic (Delayed)**
- No data available.
- Ingestion**
- Acute (Immediate)**
- May cause irritation.
- Chronic (Delayed)**
- No data available.
- Carcinogenic Effects**
- Although this material does contain several components that are either carcinogens or potential carcinogens the material as a whole is not classified as a carcinogen according to regulatory guidelines. While the following components are listed by IARC as carcinogenic, they are bound in the matrix of this product and not expected to be released under normal use.

Carcinogenic Effects			
	CAS	IARC	NTP
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen
Titanium dioxide	13463-67-7	Group 2B-Possible Carcinogen	Evidence of Carcinogenicity

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	UN1325	Flammable solids, organic, n.o.s. (Naphtha)	4.1	II	NDA
TDG	UN1325	FLAMMABLE SOLID, ORGANIC, N.O.S. (Naphtha)	4.1	II	NDA
IMO/IMDG	UN1325	FLAMMABLE SOLID, ORGANIC, N.O.S. (Naphtha)	4.1	II	NDA
ADN	UN1325	FLAMMABLE SOLID, ORGANIC, N.O.S. (Naphtha)	4.1	II	NDA
ADR/RID	UN1325	FLAMMABLE SOLID, ORGANIC, N.O.S. (Naphtha)	4.1	II	NDA
IATA/ICAO	UN1325	Flammable solid, organic, n.o.s. (Naphtha)	4.1	II	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.

14.8 Other information

- DOT** • This product can qualify for the limited quantity exception found under 49 CFR § 173.151 Exceptions for Class 4.

Section 15 - Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

SARA Hazard Classifications • Acute, Chronic, Fire

State Right To Know				
Component	CAS	MA	NJ	PA
Calcium oxide	1305-78-8	Yes	Yes	Yes
Light aliphatic solvent naphtha	64742-89-8	No	No	No
Quartz	14808-60-7	Yes	Yes	Yes
Solvent naphtha (petroleum), medium aliph.	64742-88-7	No	Yes	No
Titanium dioxide	13463-67-7	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Calcium oxide	1305-78-8	Yes	No	Yes	No	Yes

Light aliphatic solvent naphtha	64742-89-8	Yes	No	Yes	No	Yes
Quartz	14808-60-7	Yes	No	Yes	No	Yes
Solvent naphtha (petroleum), medium aliph.	64742-88-7	Yes	No	Yes	No	Yes
Titanium dioxide	13463-67-7	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Calcium oxide	1305-78-8	E 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.)
• Titanium dioxide	13463-67-7	
• Light aliphatic solvent naphtha	64742-89-8	B2
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	B3 (petroleum, C9-12) D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.)
• Quartz	14808-60-7	

Canada - WHMIS - Ingredient Disclosure List

• Calcium oxide	1305-78-8	1 %
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	1 %

Environment

Canada - CEPA - Priority Substances List

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Xn; R48/20-65

• Quartz	14808-60-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits		
• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	T R:45-46-65 S:53-45
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Xn R:48/20-65 S:(2)-23-24-62
• Quartz	14808-60-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations		
• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	P
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	S:53-45
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	S:(2)-23-24-62
• Quartz	14808-60-7	Not Listed

United States

Labor		
U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals		
• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed
U.S. - OSHA - Specifically Regulated Chemicals		
• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed
Environment		
U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants		
• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities		

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Calcium oxide	1305-78-8	Not Listed carcinogen, initial date 9/2/11
• Titanium dioxide	13463-67-7	(airborne, unbound particles of respirable size)
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	carcinogen, initial date 10/1/88 (airborne particles of respirable size)

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

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

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Calcium oxide	1305-78-8	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Solvent naphtha (petroleum), medium aliph.	64742-88-7	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)

- H304 - May be fatal if swallowed and enters airways
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage
- H340 - May cause genetic defects.
- H341 - Suspected of causing genetic defects.
- H350 - May cause cancer.
- H350i - May cause cancer by inhalation.
- H351 - Suspected of causing cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H373 - May cause damage to organs - Lungs through prolonged or repeated exposure via Inhalation

Revision Date

- 28/January/2016

Preparation Date

- 04/December/2015

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Key to abbreviations

NDA = No data available