

## Safety Data Sheet

## Firestone Building Products Company

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

## 1.1 Product identifier

**Product Name** • UltraPly™ TPO Cut Edge Sealant LVOC

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

**Relevant identified use(s)** • Construction

## 1.3 Details of the supplier of the safety data sheet

**Manufacturer** • Firestone Building Products Company  
200 4th Avenue S  
Nashville, TN 37201-2208  
United States

firestonemsds@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]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

## 2.1 Classification of the substance or mixture

**CLP** • Flammable Liquids 3 - H226  
Skin Irritation 2 - H315  
Eye Irritation 2 - H319  
Reproductive Toxicity 2 - H361

**DSD/DPD** • Irritant (Xi)  
R10, R36/38

## 2.2 Label Elements

CLP

## WARNING



**Hazard statements** • H226 - Flammable liquid and vapour  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H361 - Suspected of damaging fertility or the unborn child.

## Precautionary statements

- Prevention** • P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground and/or bond container and receiving equipment.  
P241 - Use explosion-proof electrical/ventilating/lighting/equipment.  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P264 - Wash thoroughly after handling.  
P280 - Wear protective gloves and eye/face protection , .  
P281 - Use personal protective equipment as required.
- Response** • P370+P378 - In case of fire: Use appropriate media for extinction.  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P363 - Wash contaminated clothing before reuse.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P321 - Specific treatment, see supplemental first aid information.  
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** • P403+P235 - Store in a well-ventilated place. Keep cool.  
P233 - Keep container tightly closed.  
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**DSD/DPD**

- Risk phrases** • R10 - Flammable.  
R36/38 - Irritating to eyes and skin.
- Safety phrases** • S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**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** • Flammable Liquids 3  
Skin Irritation 2  
Eye Irritation 2A  
Reproductive Toxicity 2

**2.2 Label elements**

OSHA HCS 2012

**WARNING**

- Hazard statements** • Flammable liquid and vapour  
Causes skin irritation

Causes serious eye irritation  
Suspected of damaging fertility or the unborn child.

## 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.  
Keep container tightly closed.  
Ground and/or bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wash thoroughly after handling.  
Wear protective gloves and eye/face protection , .
- Response** • IF exposed or concerned: Get medical advice/attention.  
If eye irritation persists: 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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If skin irritation occurs: Get medical advice/attention.  
In case of fire: Use appropriate media for extinction.  
Specific treatment, see supplemental first aid information.  
Wash contaminated clothing before reuse.
- Storage/Disposal** • Store in a well-ventilated place. Keep cool.  
Keep container tightly closed.  
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
- Combustible Liquids - B3  
Other Toxic Effects - D2A  
Other Toxic Effects - D2B

## 2.2 Label elements

WHMIS



WHMIS

- Combustible Liquids - B3  
Other Toxic Effects - D2A  
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 in accordance with Regulation (EC) No 1272/2008.

## 3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
1-Chloro-4-(trifluoromethyl) benzene	CAS:98-56-6 EC Number:202-681-1	50% TO 100%	Ingestion/Oral-Rat LD50 • 13 g/kg Inhalation-Rat LC50 • 22 g/m <sup>3</sup>	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA
Xylene	CAS:1330-20-7 EC Number:215-535-7 EU Index:601-022-00-9	2.5% TO 10%	Ingestion/Oral-Rat LD50 • 4300 mg/kg Inhalation-Rat LC50 • 5000 ppm 4 Hour(s) Skin-Rabbit LD50 • >1700 mg/kg	EU DSD/DPD: Annex VI, Table 3.2: R10 Xn R20/21 Xi R38 EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H225; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315 OSHA HCS 2012: Flam. Liq. 3; Acute Tox. 4 (skn) Eye Irrit. 2, Skin Irrit. 2, Repr. 2; STOT SE 3: Resp. Irrit. & Narc	NDA
Titanium dioxide	CAS:13463-67-7 EC Number:236-675-5	<= 2.5%	NDA	EU DSD/DPD: Self Classified: Carc. Cat. 3 R40 EU CLP: Self Classified: Carc. 2, H351 OSHA HCS 2012: Carc. 2	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

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately if symptoms occur.

#### Skin

- Rinse skin with rubbing alcohol first, followed immediately by washing affected area with soap and water. Remove and isolate contaminated clothing and shoes. 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.

### 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** • Carbon dioxide, sand, extinguishing powder.

- Unsuitable Extinguishing Media**
- Do not use a direct stream of water.

## 5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames. May form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Containers may explode when heated. Many liquids are lighter than water. Toxic fumes and vapors may be produced.

- Hazardous Combustion Products**
- No data available

## 5.3 Advice for firefighters

- 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 positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Move containers from fire area if you can do it without risk. Cool fire exposed containers with water.

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Ventilate the area before entry. Do not walk through spilled material. Wear appropriate personal protective equipment. Avoid breathing mist, vapours, spray. Avoid contact with skin, eyes, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective 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 for at least 50 meters (150 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. **LARGE SPILL:** Consider initial downwind evacuation for at least 300 meters (1000 feet) Keep unauthorized personnel away. Ventilate closed spaces before entering. 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**
- Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. All equipment used when handling the product must be grounded. **LARGE SPILLS:** Dike far ahead of liquid spill for later disposal. **LARGE SPILLS:** Water spray may reduce vapor; but may not prevent ignition in closed spaces.

### 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. All equipment used when handling the product must be grounded. Take precautionary measures against static charges. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapours, spray. Avoid contact with skin, eyes, and clothing. Handle and open container with care. Use good safety and industrial hygiene practices. 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 away from heat, sparks and flame. Keep container tightly 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	Australia	Belgium	Canada Alberta	Canada British Columbia
Xylene (1330-20-7)	STELs	150 ppm STEL	150 ppm STEL; 655 mg/m <sup>3</sup> STEL	100 ppm STEL; 442 mg/m <sup>3</sup> STEL	150 ppm STEL; 651 mg/m <sup>3</sup> STEL	150 ppm STEL
	TWAs	100 ppm TWA	80 ppm TWA; 350 mg/m <sup>3</sup> TWA	50 ppm TWA; 221 mg/m <sup>3</sup> TWA	100 ppm TWA; 434 mg/m <sup>3</sup> TWA	100 ppm TWA
Titanium dioxide (13463-67-7)	TWAs	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA (containing no asbestos and <1% crystalline silica, inhalable dust)	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA (total dust); 3 mg/m <sup>3</sup> TWA (respirable fraction)
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut
Xylene (1330-20-7)	STELs	150 ppm STEL	150 ppm STEL; 651 mg/m <sup>3</sup> STEL	150 ppm STEL; 652 mg/m <sup>3</sup> STEL	150 ppm STEL	150 ppm STEL; 652 mg/m <sup>3</sup> STEL
	TWAs	100 ppm TWA	100 ppm TWA; 434 mg/m <sup>3</sup> TWA	100 ppm TWA; 434 mg/m <sup>3</sup> TWA	100 ppm TWA	100 ppm TWA; 434 mg/m <sup>3</sup> TWA
Titanium dioxide (13463-67-7)	TWAs	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA (respirable mass); 10 mg/m <sup>3</sup> TWA (total mass)	10 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA (respirable mass); 10 mg/m <sup>3</sup> TWA (total mass)
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Ontario	Canada Quebec	Canada Saskatchewan	Canada Yukon	China
Xylene (1330-20-7)	STELs	150 ppm STEL	150 ppm STEV; 651 mg/m <sup>3</sup> STEV	Not established	150 ppm STEL; 650 mg/m <sup>3</sup> STEL	100 mg/m <sup>3</sup> STEL
	TWAs	100 ppm TWA	100 ppm TWAEV; 434 mg/m <sup>3</sup> TWAEV	100 ppm TWA	100 ppm TWA; 435 mg/m <sup>3</sup> TWA	50 mg/m <sup>3</sup> TWA
Titanium dioxide	STELs	Not established	Not established	Not established	20 mg/m <sup>3</sup> STEL (as Ti)	16 mg/m <sup>3</sup> STEL (total dust)
			10 mg/m <sup>3</sup> TWAEV			

(13463-67-7)	TWAs	10 mg/m3 TWA	(containing no Asbestos and <1% Crystalline silica, total dust)	10 mg/m3 TWA	30 mppcf TWA (as Ti); 10 mg/m3 TWA (as Ti)	8 mg/m3 TWA (total dust)
Exposure Limits/Guidelines (Con't.)						
	Result	Cyprus	Denmark	Germany DFG	Germany TRGS	OSHA
Xylene (1330-20-7)	TWAs	50 ppm TWA; 221 mg/m3 TWA	25 ppm TWA; 109 mg/m3 TWA	Not established	100 ppm TWA AGW (all isomers, exposure factor 2); 440 mg/m3 TWA AGW (all isomers, exposure factor 2)	100 ppm TWA; 435 mg/m3 TWA
	STELs	100 ppm STEL; 442 mg/m3 STEL	Not established	Not established	Not established	Not established
	Ceilings	Not established	Not established	200 ppm Peak (all isomers); 880 mg/m3 Peak (all isomers)	Not established	Not established
	MAKs	Not established	Not established	100 ppm TWA MAK (all isomers); 440 mg/m3 TWA MAK (all isomers)	Not established	Not established
Titanium dioxide (13463-67-7)	TWAs	Not established	6 mg/m3 TWA (as Ti)	Not established	Not established	15 mg/m3 TWA (total dust)

## Exposure Control Notations

### Cyprus

- Xylene (1330-20-7): **Skin:** (Skin-potential for cutaneous absorption)

### Germany TRGS

- Xylene (1330-20-7): **Skin:** (skin notation (all isomers))

### Germany DFG

- Xylene (1330-20-7): **Pregnancy:** (classification not yet possible (all isomers)) | **Skin:** (skin notation (all isomers))
- Titanium dioxide (13463-67-7): **Carcinogens:** (Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles))

## 8.2 Exposure controls

### Engineering Measures/Controls

- This adhesive 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

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH 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 chemical resistant clothing. Wear appropriate gloves.

### 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

STEV = Short Term Exposure Value

NIOSH = National Institute of Occupational Safety and Health

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

OSHA = Occupational Safety and Health Administration

TWAEEV = Time-Weighted Average Exposure Value

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	White, gray or tan viscous liquid with a characteristic odor.
Color	White, gray or tan.	Odor	Characteristic
Odor Threshold	Data lacking		
General Properties			
Boiling Point	139 °C(282.2 °F)	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	= 1.35 Water=1	Density	11.2 lbs/gal
Water Solubility	Immiscible	Viscosity	Data lacking
Explosive Properties	Data lacking	Oxidizing Properties:	Data lacking
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking	VOC (Wt.)	0.4 lbs/gal
Flammability			
Flash Point	47 °C(116.6 °F)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not relevant.		
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

- Keep away from heat, sparks, and flame.

### 10.5 Incompatible materials

- Strong oxidizers, acids, and bases.

### 10.6 Hazardous decomposition products

- Carbon monoxide, carbon dioxide, nitrogen oxides.



## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Components		
1-Chloro-4-(trifluoromethyl)benzene (50% TO 100%)	98-56-6	<b>Acute Toxicity:</b> Ingestion-Oral-Rat LD50 • 13 g/kg; Inhalation-Rat LC50 • 22 g/m <sup>3</sup> ; <b>Multi-dose Toxicity:</b> Inhalation-Rat TCLo • 500 ppm 6 Hour(s) 4 Week(s)-Intermittent; <b>Blood:Changes in serum composition (e.g., TP, bilirubin cholesterol); Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Ca; Biochemical:Metabolism (intermediary):Other proteins</b>
Xylene (2.5% TO 10%)	1330-20-7	<b>Acute Toxicity:</b> Ingestion-Oral-Rat LD50 • 4300 mg/kg; <b>Liver:Other changes; Kidney, Ureter, and Bladder:Other changes;</b> Inhalation-Rat LC50 • 5000 ppm 4 Hour(s); Skin-Rabbit LD50 • >1700 mg/kg; <b>Irritation:</b> Eye-Rabbit • 5 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 100 % • Moderate irritation; <b>Reproductive:</b> Inhalation-Rat TCLo • 50 mg/m <sup>3</sup> 6 Hour(s)(1-21D preg); <b>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system; Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities; Reproductive Effects:Effects on Newborn:Growth statistics (e.g., reduced weight gain)</b>
Titanium dioxide (<= 2.5%)	13463-67-7	<b>Irritation:</b> Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; <b>Tumorigen / Carcinogen:</b> Inhalation-Rat TCLo • 250 mg/m <sup>3</sup> 6 Hour(s) 2 Year(s)-Intermittent; <b>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</b>

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 • Toxic to Reproduction 2 OSHA HCS 2012 • Toxic to Reproduction 2
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

Route(s) of entry/exposure • Inhalation, Skin, Eye, Ingestion

#### Potential Health Effects

##### Inhalation

Acute (Immediate) • No data available

- 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)**
  - No harmful effects expected in amounts likely to be ingested by accident.
- Chronic (Delayed)**
  - No data available.
- Carcinogenic Effects**
  - Although this material contains titanium dioxide, which may be a carcinogen, due to the physical form of this material, it is unlikely that exposure to titanium dioxide will occur while using this material under normal conditions.

Carcinogenic Effects		
	CAS	IARC
Titanium dioxide	13463-67-7	Group 2B-Possible Carcinogen

- Reproductive Effects**
  - May cause adverse reproductive effects - such as birth defects, miscarriages or infertility based on animal data.

**Key to abbreviations**

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

## Section 12 - Ecological Information

### 12.1 Toxicity

- Not expected to be harmful to aquatic organisms.

### 12.2 Persistence and degradability

- No information available for the product.

### 12.3 Bioaccumulative potential

- No information available for the product.

### 12.4 Mobility in Soil

- No information available for the product.

### 12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been carried out.

### 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

- Containers, even those that have been emptied, can contain explosive vapors. 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	UN1133	Adhesives	3	III	NDA
TDG	UN1133	ADHESIVES	3	III	Potential Marine Pollutant
IMO/IMDG	UN1133	ADHESIVES	3	III	NDA
ADN	UN1133	ADHESIVES	3	III	NDA
ADR/RID	UN1133	ADHESIVES	3	III	NDA
IATA/ICAO	UN1133	Adhesives	3	III	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of Marpol 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 • Fire, Acute, Chronic

State Right To Know				
Component	CAS	MA	NJ	PA
1-Chloro-4-(trifluoromethyl) benzene	98-56-6	No	No	No
Titanium dioxide	13463-67-7	Yes	Yes	Yes
Xylene	1330-20-7	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Yes	No	Yes	Yes	No
Titanium dioxide	13463-67-7	Yes	No	Yes	Yes	No
Xylene	1330-20-7	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	Yes	Yes
Xylene	1330-20-7	Yes	Yes	Yes

**Australia****Labor****Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

**Australia - High Volume Industrial Chemicals List**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	
• Xylene	1330-20-7	

**Australia - List of Designated Hazardous Substances - Classification**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Xn, Xi R10, R20/21, R38

**Environment****Australia - National Pollutant Inventory (NPI) Substance List**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	10 tonne/yr Threshold category 1 (including individual or mixed isomers)

**Australia - Ozone Protection Act - Scheduled Substances**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

**Australia - Priority Existing Chemical Program**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Candidate chemical

**Belgium****Labor****Belgium - Substances and Preparations - Carcinogens and Mutagens**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

**Bulgaria****Environment****Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	0.1 mg/m3 MAHCL

**Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 30 Minute**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

**Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - Annual**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

**Canada****Labor****Canada - WHMIS - Classifications of Substances**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed 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	
• Xylene	1330-20-7	B2, D2A, D2B

**Canada - WHMIS - Ingredient Disclosure List**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

**Environment****Canada - CEPA - Priority Substances List**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Priority Substance List 1 (substance not considered toxic)

**China****Other****China - Annex I & II - Controlled Chemicals Lists**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

**Denmark****Environment****Denmark - List of Undesirable Substances - Product Groups/Function**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	R10 Xn; R20/21 Xi; R38

**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	12.5%<=C: Xn; R:20/21
<b>EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Xn R:10-20/21-38 S:(2)-25
<b>EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	C
<b>EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	S:(2)-25

## Germany

<b>Labor</b>		
<b>Germany - Immission Control - Qualifying Quantities for Major Accident Prevention</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - Immission Control - Qualifying Quantities for Safety Reporting</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - TRGS 505 - Specific Lead Regulations</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - TRGS 511 - Specific Ammonium Nitrate Regulations</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

## Environment

<b>Germany - TA Luft - Types and Classes</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - TA Luft - Emission Limits for Carcinogenic Substances</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - TA Luft - Emission Limits for Fibers</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed

• Xylene	1330-20-7	Not Listed
<b>Germany - TA Luft - Emission Limits for Inorganic Dusts</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - TA Luft - Emission Limits for Inorganic Gases</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - TA Luft - Emission Limits for Organic Substances</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>Germany - Water Classification (VwVwS) - Annex 1</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	ID Number 1345, not considered hazardous to water
• Xylene	1330-20-7	Not Listed
<b>Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	ID Number 1112, hazard class 2 - hazard to waters
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	ID Number 206, hazard class 2 - hazard to waters
<b>Germany - Water Classification (VwVwS) - Annex 3</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

## United States

<b>Labor</b>		
<b>U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>U.S. - OSHA - Specifically Regulated Chemicals</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

<b>Environment</b>		
<b>U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	(isomers and mixtures)
<b>U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed

• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	100 lb final RQ; 45.4 kg final RQ
<b>U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>U.S. - CERCLA/SARA - Section 313 - Emission Reporting</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	1.0 % de minimis concentration
<b>U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - Basis for Listing - Appendix VII</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Included in waste stream: F039
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - Constituents for Detection Monitoring</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - List for Hazardous Constituents</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	0.32 mg/L (wastewater); 30 mg/kg (nonwastewater)
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - TSD Facilities Ground Water Monitoring</b>		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	(total)



**U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	waste number U239 (Ignitable waste)

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	carcinogen, initial date 9/2/11 (airborne, unbound particles of respirable size)
• Xylene	1330-20-7	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Titanium dioxide	13463-67-7	Not Listed
• Xylene	1330-20-7	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)

- H225 - Highly flammable liquid and vapour
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H351 - Suspected of causing cancer.
- R20/21 - Harmful by inhalation and in contact with skin.
- R38 - Irritating to skin.
- R40 - Limited evidence of a carcinogenic effect.

### Revision Date

- 02/March/2018

### Preparation Date

- 04/August/2011

### Other Information

- Changes to this revision: Updated mailing address.

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### Key to abbreviations

NDA = No data available