

## Safety Data Sheet

## GenFlex Roofing Systems

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

## 1.1 Product identifier

**Product Name** | GenPrime™ 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  
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]  
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

## 2.1 Classification of the substance or mixture

**CLP** | Flammable Liquids 2 - H225  
Aspiration 1 - H304  
Skin Irritation 2 - H315  
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336  
Reproductive Toxicity 2 - H361d  
Specific Target Organ Toxicity Repeated Exposure 2 - H373

**DSD/DPD** | Highly Flammable (F)  
Irritant (Xi)  
Harmful (Xn)  
Substances Toxic To Reproduction - Category 3  
R11, R38, R48/20, R63, R65, R67

## 2.2 Label Elements

CLP

**DANGER**



**Hazard statements** | H225 - Highly flammable liquid and vapour  
 H304 - May be fatal if swallowed and enters airways  
 H315 - Causes skin irritation  
 H336 - May cause drowsiness or dizziness  
 H361d - Suspected of damaging the unborn child.  
 H373 - May cause 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.  
 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.  
 P260 - Do not breathe mists, vapours, and/or spray.  
 P264 - Wash thoroughly after handling.  
 P271 - Use only outdoors or in a well-ventilated area.  
 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.  
 P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
 P314 - Get medical advice/attention if you feel unwell.  
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P321 - Specific treatment, see supplemental first aid information.  
 P332+P313 - If skin irritation occurs: Get medical advice/attention.  
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 P331 - Do NOT induce vomiting.  
 P308+P313 - IF exposed or concerned: Get medical advice/attention.

**Storage/Disposal** | P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
 P235 - Keep cool.  
 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### DSD/DPD



**Risk phrases** | R11 - Highly flammable.  
 R38 - Irritating to skin.  
 R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 R63 - Possible risk of harm to the unborn child.  
 R65 - Harmful: may cause lung damage if swallowed.  
 R67 - Vapours may cause drowsiness and dizziness.

**Safety phrases** | S9 - Keep container in a well ventilated place  
 S16 - Keep away from sources of ignition - No Smoking.  
 S37 - Wear suitable gloves.

### 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

<b>OSHA HCS 2012</b>	<ul style="list-style-type: none"> <li>  Flammable Liquids 2 - H225</li> <li>Aspiration 1 - H304</li> <li>Skin Irritation 2 - H315</li> <li>Eye Irritation 2 - H319</li> <li>Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336</li> <li>Reproductive Toxicity 2 - H361</li> <li>Specific Target Organ Toxicity Repeated Exposure 2 - H373</li> </ul>
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## 2.2 Label elements

**OSHA HCS 2012**

### DANGER



<b>Hazard statements</b>	<ul style="list-style-type: none"> <li>  Highly flammable liquid and vapour - H225</li> <li>May be fatal if swallowed and enters airways - H304</li> <li>Causes skin irritation - H315</li> <li>Causes serious eye irritation - H319</li> <li>May cause drowsiness or dizziness - H336</li> <li>Suspected of damaging fertility or the unborn child. - H361</li> <li>May cause damage to organs through prolonged or repeated exposure. - H373</li> </ul>
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### Precautionary statements

<b>Prevention</b>	<ul style="list-style-type: none"> <li>  Obtain special instructions before use. - P201</li> <li>Do not handle until all safety precautions have been read and understood. - P202</li> <li>Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. - P210</li> <li>Keep container tightly closed. - P233</li> <li>Ground and/or bond container and receiving equipment. - P240</li> <li>Use explosion-proof electrical/ventilating/lighting/equipment. - P241</li> <li>Use only non-sparking tools. - P242</li> <li>Take precautionary measures against static discharge. - P243</li> <li>Do not breathe mists, vapours, and/or spray. - P260</li> <li>Wash thoroughly after handling. - P264</li> <li>Use only outdoors or in a well-ventilated area. - P271</li> <li>Wear protective gloves and eye/face protection , . - P280</li> </ul>
<b>Response</b>	<ul style="list-style-type: none"> <li>  In case of fire: Use appropriate media for extinction. - P370+P378</li> <li>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340</li> <li>Call a POISON CENTER or doctor/physician if you feel unwell. - P312</li> <li>Get medical advice/attention if you feel unwell. - P314</li> <li>If on skin: Wash with plenty of water .</li> <li>Take off contaminated clothing and wash before reuse. - P362</li> <li>Specific treatment, see supplemental first aid information. - P321</li> <li>If skin irritation occurs: Get medical advice/attention. - P332+P313</li> <li>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338</li> <li>If eye irritation persists: Get medical advice/attention. - P337+P313</li> <li>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. - P301+P310</li> <li>Do NOT induce vomiting. - P331</li> <li>IF exposed or concerned: Get medical advice/attention. - P308+P313</li> </ul>
<b>Storage/Disposal</b>	<ul style="list-style-type: none"> <li>  Store in a well-ventilated place. Keep container tightly closed. - P403+P233</li> <li>Keep cool. - P235</li> <li>Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501</li> </ul>

## 2.3 Other hazards

<b>OSHA HCS 2012</b>	<ul style="list-style-type: none"> <li>  Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.</li> </ul>
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**Canada****According to WHMIS****2.1 Classification of the substance or mixture**

<b>WHMIS</b>		Flammable Liquids - B2 Other Toxic Effects - D2A Other Toxic Effects - D2B
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**2.2 Label elements****WHMIS**

	Flammable Liquids - B2 Other Toxic Effects - D2A Other Toxic Effects - D2B
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**2.3 Other hazards****WHMIS**

	In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).
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**Section 3 - Composition/Information on Ingredients****3.1 Substances**

	Material does not meet the criteria of a substance.
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**3.2 Mixtures**

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
1-Chloro-4-(trifluoromethyl) benzene	<b>CAS:</b> 98-56-6 <b>EC Number:</b> 202-681-1	50% TO 100%	Ingestion/Oral-Rat LD50 • 13 g/kg Inhalation-Rat LC50 • 22 g/m <sup>3</sup>	<b>EU DSD/DPD:</b> Not Classified <b>EU CLP:</b> Not Classified <b>OSHA HCS 2012:</b> Not Classified	NDA
Toluene	<b>CAS:</b> 108-88-3 <b>EC Number:</b> 203-625-9 <b>EU Index:</b> 601-021-00-3	5% TO 20%	Ingestion/Oral-Rat LD50 • 636 mg/kg Inhalation-Rat LC50 • 49 g/m <sup>3</sup> 4 Hour(s) Skin-Rabbit LD50 • 14100 µL/kg	<b>EU DSD/DPD:</b> Annex VI, Table 3.2: F; R11; Repr. 3; R63; Xn; R48/20-65; Xi; R38; R67 <b>EU CLP:</b> Annex VI, Table 3.1: Flam. Liq. 2, H225; Repr. 2, H361d; Asp. Tox. 1, H304; STOT RE 2*, H373; Skin Irrit. 2, H315; STOT SE 3: Narc., H336 <b>OSHA HCS 2012:</b> Flam. Liq. 2; Repr. 2; Acute Tox. 4 (orl); STOT SE 3: Narc.; Asp. Tox. 1; Eye Irrit. 2; Skin Irrit. 2	NDA

**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.
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- Skin** | Wash skin with soap and water. 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** | Do NOT induce vomiting. 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** | Carbon dioxide, sand, extinguishing powder.

- Unsuitable Extinguishing Media** | Do not use 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. Containers may explode when heated. Vapor explosion hazard indoors, outdoors or in sewers. Many liquids are lighter than water. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Runoff to sewer may create fire or explosion hazard. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

- Hazardous Combustion Products** | No data available

### 5.3 Advice for firefighters

- | Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk. LARGE FIRES: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out. Stop leak if safe to do so. If leak cannot be stopped, and if there is no risk to the surrounding area, let the fire burn itself out.

## Section 6 - Accidental Release Measures

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

- Personal Precautions** | Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breath mist/vapours/spray. Avoid contact with skin, eyes, and clothing.

- Emergency Procedures** | 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) ELIMINATE all ignition sources (no

smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

## 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

- Keep away from heat, sparks and open flame. Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe mist/vapours/spray. Avoid contact with skin, eyes, and clothing. Do not ingest. Take precautionary measures against static charges. Bond and ground all transfer containers and equipment. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near container. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage

- Keep container tightly closed. Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Protect from sunlight.

### 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
Toluene (108-88-3)	STELs	Not established	150 ppm STEL; 574 mg/m3 STEL	100 ppm STEL; 384 mg/m3 STEL	Not established	Not established
	TWAs	20 ppm TWA	50 ppm TWA; 191 mg/m3 TWA	22 ppm TWA; 77 mg/m3 TWA	50 ppm TWA; 188 mg/m3 TWA	20 ppm TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut
Toluene (108-88-3)	TWAs	20 ppm TWA	50 ppm TWA; 188 mg/m3 TWA	100 ppm TWA; 375 mg/m3 TWA	20 ppm TWA	100 ppm TWA; 375 mg/m3 TWA
	STELs	Not established	Not established	150 ppm STEL; 560 mg/m3 STEL	Not established	150 ppm STEL; 560 mg/m3 STEL

Exposure Limits/Guidelines (Con't.)						
	Result	Canada Ontario	Canada Quebec	Canada Saskatchewan	Canada Yukon	China
Toluene (108-88-3)	STELs	Not established	Not established	Not established	150 ppm STEL; 560 mg/m3 STEL	100 mg/m3 STEL
	TWAs	20 ppm TWA	50 ppm TWAEV; 188 mg/m3 TWAEV	50 ppm TWA	100 ppm TWA; 375 mg/m3 TWA	50 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Cyprus	Denmark	Europe	Germany DFG	Germany TRGS
Toluene (108-88-3)	STELs	100 ppm STEL; 384 mg/m3 STEL	Not established	100 ppm STEL; 384 mg/m3 STEL	Not established	Not established
	TWAs	50 ppm TWA; 192 mg/m3 TWA	25 ppm TWA; 94 mg/m3 TWA	50 ppm TWA; 192 mg/m3 TWA	Not established	50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4); 190 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4)
	Ceilings	Not established	Not established	Not established	200 ppm Peak; 760 mg/m3 Peak	Not established
	MAKs	Not established	Not established	Not established	50 ppm TWA MAK; 190 mg/m3 TWA MAK	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	NIOSH		OSHA		
Toluene (108-88-3)	Ceilings	Not established		300 ppm Ceiling		
	TWAs	100 ppm TWA; 375 mg/m3 TWA		200 ppm TWA		
	STELs	150 ppm STEL; 560 mg/m3 STEL		Not established		

### Exposure Control Notations

- China**
- Toluene (108-88-3): **Skin:** (Skin notation)
- Canada Quebec**
- Toluene (108-88-3): **Skin:** (Skin designation)
- Cyprus**
- Toluene (108-88-3): **Skin:** (Skin-potential for cutaneous absorption)
- ACGIH**
- Toluene (108-88-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- Germany TRGS**
- Toluene (108-88-3): **Skin:** (skin notation)
- Germany DFG**
- Toluene (108-88-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)

### Exposure Limits Supplemental

#### ACGIH

•Toluene (108-88-3): **BEIs:** (0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene; 0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene; 0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)) | **TLV Basis - Critical Effects:** (female reproductive; pregnancy loss; visual impairment)

## 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

| 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 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

BEI = Biological Exposure Indices

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

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

TWAEV = Time-Weighted Average Exposure Value

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	Liquid	Appearance/Description	Black liquid with a characteristic odor.
Color	Black	Odor	Characteristic
Odor Threshold	Data lacking		
General Properties			
Boiling Point	110 C(230 F)	Melting Point	Not relevant
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	1.2 Water=1	Water Solubility	Not miscible or difficult to mix.
Viscosity	Data lacking	Explosive Properties	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	29 hPa @ 20 C(68 F)	Vapor Density	Data lacking
Evaporation Rate	Data lacking	VOC (Wt.)	1.9 lbs/gal
VOC (Vol.)	224 g/L		
Flammability			
Flash Point	4 C(39.2 F)	UEL	7 %
LEL	1.2 %	Autoignition	Data lacking



Flammability (solid, gas)	Data lacking		
<b>Environmental</b>			
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

- Excess heat. Avoid flames, sparks, or other sources of ignition.

### 10.5 Incompatible materials

- Strong oxidizers, acids, and bases.

### 10.6 Hazardous decomposition products

- Carbon monoxide, carbon dioxide, and hydrocarbons.

## 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; <i>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</i>
Toluene (5% TO 20%)	108-88-3	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 636 mg/kg; Inhalation-Rat LC50 • 49 g/m <sup>3</sup> 4 Hour(s); Skin-Rabbit LD50 • 14100 µL/kg; <b>Irritation:</b> Eye-Rabbit • 2 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg • Moderate irritation; <b>Mutagen:</b> Sister chromatid exchange • Inhalation-Human • 252 µg/L 19 Year(s); <b>Reproductive:</b> Inhalation-Rat TCLo • 2000 ppm 6 Hour(s)(7-17D preg); <i>Reproductive Effects:Maternal Effects:Other effects; Reproductive Effects:Effects on Newborn:Physical</i>

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Aspiration 1 OSHA HCS 2012 • Aspiration 1
Carcinogenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

<b>Germ Cell Mutagenicity</b>	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
<b>Skin corrosion/Irritation</b>	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2
<b>Skin sensitization</b>	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
<b>STOT-RE</b>	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 2
<b>STOT-SE</b>	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
<b>Toxicity for Reproduction</b>	EU/CLP • H361d - Suspected of damaging the unborn child; H361f - Suspected of damaging fertility; Toxic to Reproduction 2 OSHA HCS 2012 • Toxic to Reproduction 2
<b>Respiratory sensitization</b>	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
<b>Serious eye damage/Irritation</b>	EU/CLP • Data lacking OSHA HCS 2012 • Eye Irritation 2

## Potential Health Effects

### Inhalation

**Acute (Immediate)** | May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

**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)** | Material may be aspirated into the lungs during ingestion and/or subsequent vomiting. Aspiration of this material will cause severe lung injury, chemical pneumonitis, pulmonary edema or death.

**Chronic (Delayed)** | No data available.

### Other

**Chronic (Delayed)** | May cause damage to organs through prolonged or repeated exposure.

### 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

| 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	UN1133	Adhesives	3	II	NDA
TDG	UN1133	ADHESIVES	3	II	NDA
IMO/IMDG	UN1133	ADHESIVES	3	II	NDA
ADN	UN1133	ADHESIVES	3	II	NDA
ADR/RID	UN1133	ADHESIVES	3	II	NDA
IATA/ICAO	UN1133	Adhesives	3	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.

**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
1-Chloro-4-				

(trifluoromethyl) benzene	98-56-6	No	No	No
Toluene	108-88-3	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
Toluene	108-88-3	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
Toluene	108-88-3	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 |
| • Toluene                              | 108-88-3 | Not Listed |

#### Australia - High Volume Industrial Chemicals List

- |  |          |            |
|--|----------|------------|
| • 1-Chloro-4-(trifluoromethyl) benzene | 98-56-6  | Not Listed |
| • Toluene                              | 108-88-3 |            |

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

- |  |          |  |
|--|----------|--|
| • 1-Chloro-4-(trifluoromethyl) benzene | 98-56-6  | Not Listed   |
| • Toluene                              | 108-88-3 | F, Xn, Xi Repr.Cat.3 R11, R63, R48/20, R65, R38, R67 |

### Environment

#### Australia - National Pollutant Inventory (NPI) Substance List

- |  |          |                                  |
|--|----------|----------------------------------|
| • 1-Chloro-4-(trifluoromethyl) benzene | 98-56-6  | Not Listed                       |
| • Toluene                              | 108-88-3 | 10 tonne/yr Threshold category 1 |

#### Australia - Ozone Protection Act - Scheduled Substances

- |  |          |            |
|--|----------|------------|
| • 1-Chloro-4-(trifluoromethyl) benzene | 98-56-6  | Not Listed |
| • Toluene                              | 108-88-3 | Not Listed |

#### Australia - Priority Existing Chemical Program

- |  |          |                    |
|--|----------|--------------------|
| • 1-Chloro-4-(trifluoromethyl) benzene | 98-56-6  | Not Listed         |
| • Toluene                              | 108-88-3 | Candidate chemical |

## Belgium

### Labor

#### Belgium - Substances and Preparations - Carcinogens and Mutagens

- |  |          |            |
|--|----------|------------|
| • 1-Chloro-4-(trifluoromethyl) benzene | 98-56-6  | Not Listed |
| • Toluene                              | 108-88-3 | Not Listed |

## Bulgaria

### Environment

#### Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	0.25 mg/m3 MAHCL

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	B2, D2A, D2B

#### Canada - WHMIS - Ingredient Disclosure List

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	1 %

### Environment

#### Canada - CEPA - Priority Substances List

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Priority Substance List 1 (substance not considered toxic)

### Other

#### Canada - Accelerated Reduction/Elimination of Toxics (ARET)

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

## China

### Other

#### China - Annex I & II - Controlled Chemicals Lists

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

## Denmark

### Environment

#### Denmark - List of Undesirable Substances - Product Groups/Function

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Solvents in a wide range of products including paints, coatings and cooling lubricants (listed under Organic solvents)

## Europe

### Other

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	F; R11 Xi; R38 Xn; R48/20-65 Repr.Cat.3; R63 R67

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	F Xn R:11-38-48/20-63-65-67 S:(2)-36/37-46-62

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	S:(2)-36/37-46-62

## Germany

### Labor

#### Germany - Immission Control - Qualifying Quantities for Major Accident Prevention

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

#### Germany - Immission Control - Qualifying Quantities for Safety Reporting

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

#### Germany - TRGS 505 - Specific Lead Regulations

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

#### Germany - TRGS 511 - Specific Ammonium Nitrate Regulations

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

### Environment

#### Germany - TA Luft - Types and Classes

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

#### Germany - TA Luft - Emission Limits for Carcinogenic Substances

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

#### Germany - TA Luft - Emission Limits for Fibers

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**Germany - TA Luft - Emission Limits for Inorganic Dusts**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**Germany - TA Luft - Emission Limits for Inorganic Gases**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**Germany - TA Luft - Emission Limits for Organic Substances**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**Germany - Water Classification (VwVwS) - Annex 1**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	ID Number 1112, hazard class 2 - hazard to waters
• Toluene	108-88-3	ID Number 194, hazard class 2 - hazard to waters

**Germany - Water Classification (VwVwS) - Annex 3**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**United States****Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**U.S. - OSHA - Specifically Regulated Chemicals**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	1.0 % de minimis concentration

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151

**U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	

**U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	waste number U220

**U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	

**U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	0.080 mg/L (wastewater); 10 mg/kg (nonwastewater)

**U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring**

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	

**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
• Toluene	108-88-3	waste number U220

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	developmental toxicity, initial date 1/1/91



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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	7000 µg/day MADL (level represents absorbed dose)

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	female reproductive toxicity, initial date 8/7/09

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	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
• Toluene	108-88-3	

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Toluene	108-88-3	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 birth defects or other reproductive harm.

**Section 16 - Other Information**

**Last Revision Date** | 23/December/2014

**Preparation Date** | 30/January/2012

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**Key to abbreviations**

NDA = No data available

