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 • **Single-Ply LVOC Bonding Adhesive 1168**

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

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 EU Directive 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
Skin Irritation 2 - H315
Eye Irritation 2 - H319
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
Reproductive Toxicity 2 - H361d
EUH066

DSD/DPD • Highly Flammable (F)
Irritant (Xi)
Substances Toxic To Reproduction - Category 3
R11, R36/37/38, R63, R66, R67

2.2 Label Elements

CLP

DANGER

Hazard statements

- H225 - Highly flammable liquid and vapour
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H335 - May cause respiratory irritation
- H336 - May cause drowsiness or dizziness
- H361d - Suspected of damaging the unborn child.
- EUH066 - Repeated exposure may cause skin dryness or cracking.

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.
- P261 - Avoid breathing mist/vapours/spray.
- P264 - Wash thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/protective clothing/eye protection/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.
- 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.
- P362 - Take off contaminated clothing and wash before reuse.
- 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

- P233 - Keep container tightly closed.
- P403+P235 - Store in a well-ventilated place. 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.
- R36/37/38 - Irritating to eyes, respiratory system and skin.
- R63 - Possible risk of harm to the unborn child.
- R66 - Repeated exposure may cause skin dryness or cracking.
- 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.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 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 preparation 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 2 - H225
  Skin Irritation 2 - H315
  Eye Irritation 2A - H319
  Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
  Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
  Reproductive Toxicity 2 - H361

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements

- Highly flammable liquid and vapour - H225
  Causes skin irritation - H315
  Causes serious eye irritation - H319
  May cause respiratory irritation - H335
  May cause drowsiness or dizziness - H336
  Suspected of damaging fertility or the unborn child. - H361

Precautionary statements

Prevention

- Obtain special instructions before use. - P201
  Do not handle until all safety precautions have been read and understood. - P202
  Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. - P210
  Keep container tightly closed. - P233
  Ground and/or bond container and receiving equipment. - P240
  Use explosion-proof electrical/ventilating/lighting/equipment. - P241
  Use only non-sparking tools. - P242
  Take precautionary measures against static discharge. - P243
  Avoid breathing mist/vapours/spray. - P261
  Wash thoroughly after handling. - P264
  Use only outdoors or in a well-ventilated area. - P271
  Wear protective gloves/protective clothing/eye protection/face protection. - P280
  Use personal protective equipment as required. - P281

Response

- In case of fire: Use appropriate media for extinction. - P370+P378
  IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
  Call a POISON CENTER or doctor/physician if you feel unwell. - P312
  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. - P303+P361+P353
  Specific treatment, see supplemental first aid information. - P321
  If skin irritation occurs: Get medical advice/attention. - P332+P313
  Take off contaminated clothing and wash before reuse. - P362
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
  If eye irritation persists: Get medical advice/attention. - P337+P313
  IF exposed or concerned: Get medical advice/attention. - P308+P313

Storage/Disposal

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

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 Liquids - B2
  Other Toxic Effects - D2A
  Other Toxic Effects - D2B

2.2 Label elements

WHMIS

- Flammable Liquids - B2
  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).

See Section 12 for Ecological Information.

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**
Acetone	**CAS:**67-64-1 **EC Number:**200-662-2	10% TO 40%	Inhalation-Rat LC50 • 50100 mg/m³ 8 Hour (s) Ingestion/Oral-Rat LD50 • 5800 mg/kg	**EU DSD/DPD:** Annex I: F; R11 Xi; R36 R66 R67 **EU CLP:** Annex VI: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3: Narc., H336; EUH066 **OSHA HCS 2012:** Flam. Liq. 2; Eye Irrit. 2A; STOT SE 3: Narc.	NDA
1-Chloro-4-(trifluoromethyl) benzene	**CAS:**98-56-6 **EC Number:**202-681-1	30% TO 60%	Ingestion/Oral-Rat LD50 • 13 g/kg Inhalation-Rat LC50 • 22 g/m³	**EU DSD/DPD:** Self Classified: Xi, R36/37/38 **EU CLP:** Self Classified: Eye Irrit. 2, H319; Skin Irrit. 2, H315; STOT SE 3 - Resp. Irrit., H335 **OSHA HCS 2012:** Eye Irrit. 2A; Skin Irrit. 2; STOT SE 3: Resp. Irrit.	NDA
Toluene	**CAS:**108-88-3 **EC Number:**203-625-9	1% TO 7%	Ingestion/Oral-Rat LD50 • 636 mg/kg Inhalation-Rat LC50 • 49 g/m³ 4 Hour(s) Skin-Rabbit LD50 • 14100 µL/kg	**EU DSD/DPD:** Annex I: F; R11 Xi; R38 Xn; R48/20-65 Repr.Cat.3; R63 R67 **EU CLP:** Annex VI: Flam. Liq. 2, H225; Repr. 2, H361d; Asp. Tox. 1, H304; STOT RE 2, H373; Skin Irrit. 2, H315; STOT SE 3: Narc., H336 **OSHA HCS 2012:** Flam. Liq. 2; Repr. 2; Acute Tox. 4 (Oral); STOT SE 3: Narc.; Asp. Tox. 1; Eye Irrit. 2B	NDA

Acetic acid, methyl ester	**CAS:**79-20-9 **EC Number:**201-185-2	1% TO 15%	Ingestion/Oral-Rat LD50 • >5 g/kg Skin-Rabbit LD50 • >5 g/kg	**EU DSD/DPD:** Annex I: F; R11 Xi; R36 R66 R67 **EU CLP:** Annex VI: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3: Narc., H336; EUH066 **OSHA HCS 2012:** Flam. Liq. 2; Eye Irrit. 2; Skin Irrit. 2; STOT RE 3: Narc. & Resp. Irrit.	NDA

See Section 11 for Toxicological Information.

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.

Skin
- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

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
- If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. 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
- CAUTION: For mixtures containing a high percentage of an alcohol or polar solvent, alcohol-resistant foam may be more effective.
  LARGE FIRES: Water spray, fog or alcohol-resistant foam.
  SMALL FIRES: Dry chemical, CO2, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media
- None known.

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.
  Dried solids can burn and release toxic fumes and vapors.

Hazardous Combustion Products
- Carbon dioxide, carbon monoxide, oxides of nitrogen, hydrogen chloride, various hydrocarbons, phenols, acrid smoke and irritating fumes.

5.3 Advice for firefighters

- No action shall be taken involving any personal risk or without suitable training.
  Move containers from fire area if you can do it without risk.
  Structural firefighters' protective clothing will only provide limited protection.
  Wear chemical protective clothing that is specifically recommended by the

manufacturer. It may provide little or no thermal protection.
Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Ventilate enclosed areas. Wear appropriate protective clothing. Do not touch or walk through spilled material.

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 out of low areas. Stay upwind. Keep unauthorized personnel away. 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.
A vapor suppressing foam may be used to reduce vapors.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use clean non-sparking tools to collect absorbed material.
All equipment used when handling the product must be grounded.

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 fire. Keep away from heat and sparks. Do not eat, drink or smoke when using this product. After handling wash hands thoroughly. Prevent formation of aerosols. All equipment used when handling the product must be grounded. Bond and ground all transfer containers and equipment. Take precautionary measures against static charges. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near container.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry place. Store in a well-ventilated place. Keep container tightly closed. Keep away from fire.

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	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick
Toluene (108-88-3)	TWAs	20 ppm TWA	50 ppm TWA; 188 mg/m3 TWA	20 ppm TWA	20 ppm TWA	50 ppm TWA; 188 mg/m3 TWA

Acetic acid, methyl ester (79-20-9)	STELs	250 ppm STEL	250 ppm STEL; 757 mg/m3 STEL	250 ppm STEL	250 ppm STEL	250 ppm STEL; 757 mg/m3 STEL
	TWAs	200 ppm TWA	200 ppm TWA; 606 mg/m3 TWA	200 ppm TWA	200 ppm TWA	200 ppm TWA; 606 mg/m3 TWA
Acetone (67-64-1)	STELs	750 ppm STEL	750 ppm STEL; 1800 mg/m3 STEL	500 ppm STEL	750 ppm STEL	750 ppm STEL; 1782 mg/m3 STEL
	TWAs	500 ppm TWA	500 ppm TWA; 1200 mg/m3 TWA	250 ppm TWA	500 ppm TWA	500 ppm TWA; 1188 mg/m3 TWA

Exposure Limits/Guidelines (Con't.)

	Result	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec
Toluene (108-88-3)	STELs	150 ppm STEL; 560 mg/m3 STEL	Not established	150 ppm STEL; 560 mg/m3 STEL	Not established	Not established
	TWAs	100 ppm TWA; 375 mg/m3 TWA	20 ppm TWA	100 ppm TWA; 375 mg/m3 TWA	20 ppm TWA	50 ppm TWAEV; 188 mg/m3 TWAEV
Acetic acid, methyl ester (79-20-9)	STELs	250 ppm STEL; 760 mg/m3 STEL	250 ppm STEL	250 ppm STEL; 760 mg/m3 STEL	250 ppm STEL	250 ppm STEV; 757 mg/m3 STEV
	TWAs	200 ppm TWA; 605 mg/m3 TWA	200 ppm TWA	200 ppm TWA; 605 mg/m3 TWA	200 ppm TWA	200 ppm TWAEV; 606 mg/m3 TWAEV
Acetone (67-64-1)	STELs	1250 ppm STEL; 2970 mg/m3 STEL	750 ppm STEL	1250 ppm STEL; 2970 mg/m3 STEL	750 ppm STEL	1000 ppm STEV; 2380 mg/m3 STEV
	TWAs	1000 ppm TWA; 2370 mg/m3 TWA	500 ppm TWA	1000 ppm TWA; 2370 mg/m3 TWA	500 ppm TWA	500 ppm TWAEV; 1190 mg/m3 TWAEV

Exposure Limits/Guidelines (Con't.)

	Result	Canada Saskatchewan	Canada Yukon	Denmark	Europe	Germany DFG
Toluene (108-88-3)	STELs	Not established	150 ppm STEL; 560 mg/m3 STEL	Not established	100 ppm STEL; 384 mg/m3 STEL	Not established
	TWAs	50 ppm TWA	100 ppm TWA; 375 mg/m3 TWA	25 ppm TWA; 94 mg/m3 TWA	50 ppm TWA; 192 mg/m3 TWA	Not established
	Ceilings	Not established	Not established	Not established	Not established	200 ppm Peak; 760 mg/m3 Peak
	MAKs	Not established	Not established	Not established	Not established	50 ppm TWA MAK; 190 mg/m3 TWA MAK
Acetic acid, methyl ester (79-20-9)	TWAs	200 ppm TWA	200 ppm TWA; 610 mg/m3 TWA	150 ppm TWA; 455 mg/m3 TWA	Not established	Not established
	STELs	Not established	250 ppm STEL; 760 mg/m3 STEL	Not established	Not established	Not established
	Ceilings	Not established	Not established	Not established	Not established	400 ppm Peak; 1240 mg/m3 Peak
	MAKs	Not established	Not established	Not established	Not established	100 ppm TWA MAK; 310 mg/m3 TWA MAK
Acetone (67-64-1)	TWAs	500 ppm TWA	1000 ppm TWA; 2400 mg/m3 TWA	250 ppm TWA; 600 mg/m3 TWA	Not established	Not established
	STELs	Not established	1250 ppm STEL; 3000 mg/m3 STEL	Not established	Not established	Not established
	Ceilings	Not established	Not established	Not established	Not established	1000 ppm Peak; 2400 mg/m3 Peak

	MAKs	Not established	Not established	Not established	Not established	500 ppm TWA MAK; 1200 mg/m3 TWA MAK

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
Acetic acid, methyl ester (79-20-9)	TWAs	200 ppm TWA; 610 mg/m3 TWA	200 ppm TWA; 610 mg/m3 TWA
	STELs	250 ppm STEL; 760 mg/m3 STEL	Not established
Acetone (67-64-1)	TWAs	250 ppm TWA; 590 mg/m3 TWA	1000 ppm TWA; 2400 mg/m3 TWA

Exposure Control Notations

Germany TRGS

•Toluene (108-88-3): **Skin:** (skin notation)

Germany DFG

•Acetic acid, methyl ester (79-20-9): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Pregnancy:** (classification not yet possible) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. 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/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear splash goggles.

Skin/Body

- Wear clothing and footwear that cannot be penetrated by chemicals or oil.

General Industrial Hygiene Considerations

- Avoid contact with skin, eyes or clothing. Keep away from food, drink and animal feeding stuffs. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

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

Key to abbreviations

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

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Amber liquid with characteristic odor.
Color	Amber	Odor	Characteristic
Odor Threshold	Data lacking		
General Properties			
Boiling Point	55 C(131 F)	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	1.14 Water=1	Water Solubility	Insoluble
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizer.		
Volatility			
Vapor Pressure	233 hPa	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	-19 C(-2.2 F)	UEL	13 %
LEL	2.6 %	Autoignition	Data lacking
Flammability (solid, gas)	Flammable Liquid.		
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.

10.5 Incompatible materials

- Acids, alkalies, strong oxidizers.

10.6 Hazardous decomposition products

- Carbon monoxide, carbon dioxide, hydrocarbon, hydrogen chloride and other acrid products of combustion.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
		Acute Toxicity: orl-rat LD50:5800 mg/kg; ihl-rat LC50:50100 mg/m3/8H;

Acetone (10% TO 40%)	67-64-1	**Irritation:** eye-rbt 20 mg/24H MOD; skn-rbt 500 mg/24H MLD; **Mutagen:** sln-mus-ihl 12 gm/L; **Reproductive:** orl-rat TDLo:273 gm/kg (13W male); ihl-rat TCLo:11000 ppm (6-19D preg)
1-Chloro-4-(trifluoromethyl) benzene (30% TO 60%)	98-56-6	**Acute Toxicity:** orl-rat LD50:13 gm/kg
Toluene (1% TO 7%)	108-88-3	**Acute Toxicity:** orl-rat LD50:636 mg/kg; ihl-rat LC50:49 gm/m3/4H; skn-rbt LD50:14100 uL/kg; **Irritation:** eye-rbt 100 mg/30S rinse MLD; skn-rbt 435 mg MLD; **Reproductive:** ihl-rat TCLo:1500 ppm (7-20D preg)
Acetic acid, methyl ester (1% TO 15%)	79-20-9	**Acute Toxicity:** orl-rat LD50:>5 gm/kg; skn-rbt LD50:>5 gm/kg; **Irritation:** eye-rbt 100 mg/24H MOD; skn-rbt 20 mg/24H MOD

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Aspiration Hazard	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Germ Cell Mutagenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**EU/CLP** • Skin Irritation 2 **OSHA HCS 2012** • Skin Irritation 2
Skin sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-RE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-SE	**EU/CLP** • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects;Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation **OSHA HCS 2012** • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects;Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	**EU/CLP** • Toxic to Reproduction 2 **OSHA HCS 2012** • Toxic to Reproduction 2
Respiratory sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Serious eye damage/Irritation	**EU/CLP** • Eye Irritation 2 **OSHA HCS 2012** • Eye Irritation 2A

Route(s) of entry/exposure
- Inhalation, Skin, and Eye

Potential Health Effects

Inhalation

Acute (Immediate)
- May cause respiratory irritation. 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)
- Repeated exposure may cause skin dryness or cracking.

Eye

Acute (Immediate)
- Causes serious eye irritation.

Chronic (Delayed)
- No data available.

Ingestion

Acute (Immediate)
- Although swallowing this product is an unlikely means of exposure, irritation of the mouth, pharynx, esophagus and stomach can develop following ingestion.

Chronic (Delayed)
- No data available.

Carcinogenic Effects
- The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Reproductive Effects
- Repeated or prolonged exposure to toluene may cause reproductive effects.

Key to abbreviations

TC = Toxic Concentration
MOD = Moderate
LD = Lethal Dose
LC = Lethal Concentration
MLD = Mild

Section 12 - Ecological Information

12.1 Toxicity

Single-Ply LVOC Bonding Adhesive 1168					
Dosage	**Species**	**Duration**	**Results**	**Exposure Conditions**	**Comments**
= 6.8 mg/L	**Crustacea:** Daphnia Magna	48 Hour(s)	EC50	NDA	Data for Toluene
= 28 mg/L	**Crustacea:** Daphnia Magna	48 Hour(s)	NOEC	NDA	Data for Toluene

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.

12.7 Other Information
- Water hazard class 2 (Self-assessment): hazardous to water. Do not allow product to reach sewage system. Disposal must be made according to official regulations.

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 known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not relevant.

14.8 Other information

DOT
- Acetone has a reportable quantity of 5000 lbs (2270 kg) as listed in Appendix A to 49 CFR 172.101. Toluene has a reportable quantity of 1000 lbs (454 kg) as listed in Appendix A to 49 CFR 172.101.

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**
Acetone	67-64-1	Yes	Yes	Yes
1-Chloro-4-(trifluoromethyl) benzene	98-56-6	No	No	No
Toluene	108-88-3	Yes	Yes	Yes
Acetic acid, methyl ester	79-20-9	Yes	Yes	Yes

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**EU EINECS**	**EU ELNICS**	**TSCA**
Acetone	67-64-1	Yes	No	Yes	No	Yes
1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Yes	No	Yes	No	Yes
Toluene	108-88-3	Yes	No	Yes	No	Yes
Acetic acid, methyl ester	79-20-9	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

- Acetic acid, methyl ester 79-20-9 B2, D2B
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 B2, D2B
- Toluene 108-88-3 B2, D2A, D2B

Canada - WHMIS - Ingredient Disclosure List

- Acetic acid, methyl ester 79-20-9 1 %
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 1 %
- Toluene 108-88-3 1 %

Environment

Canada - CEPA - Priority Substances List

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Priority Substance List 1 (substance not considered toxic)

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Solvents in a wide range of products including paints, coatings and cooling lubricants

Europe

Other

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

- Acetic acid, methyl ester 79-20-9 F; R11 Xi; R36 R66 R67
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 F; R11 Xi; R36 R66 R67
- 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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Not Listed

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

- Acetic acid, methyl ester 79-20-9 F Xi R:11-36-66-67 S:(2)-16-26-29-33
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 F Xi R:11-36-66-67 S:(2)-9-16-26
- 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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Not Listed

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

• Acetic acid, methyl ester	79-20-9	S:(2)-16-26-29-33
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	S:(2)-9-16-26
• Toluene	108-88-3	S:(2)-36/37-46-62

United States

Labor

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	Not Listed

Environment

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	5000 lb final RQ; 2270 kg final RQ
• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	Not Listed

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	Not Listed

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	Not Listed

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed

• Toluene	108-88-3	1.0 % de minimis concentration

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	Not Listed

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Included in waste stream: F039
• 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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	
• Toluene	108-88-3	

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Not Listed
• Toluene	108-88-3	waste number U220

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	
• Toluene	108-88-3	

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	0.28 mg/L (wastewater); 160 mg/kg (nonwastewater)
• 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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	
• Toluene	108-88-3	

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

• Acetic acid, methyl ester	79-20-9	Not Listed
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	waste number U002 (Ignitable waste)
• Toluene	108-88-3	waste number U220

United States - California

Environment

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Not Listed

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 developmental toxicity, initial date 1/1/91

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 7000 µg/day MADL (level represents absorbed dose)

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Not Listed

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 female reproductive toxicity, initial date 8/7/09

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1
- Toluene 108-88-3

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- 1-Chloro-4-(trifluoromethyl) benzene 98-56-6 Not Listed
- Acetone 67-64-1 Not Listed
- Toluene 108-88-3 Not Listed

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

- Acetic acid, methyl ester 79-20-9 Toxic; Flammable

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Acetone	67-64-1	Toxic; Flammable
• Toluene	108-88-3	Toxic (skin); Flammable (skin)

15.2 Chemical Safety Assessment

- No data available

Section 16 - Other Information

Relevant Phrases (code & full text)

- H304 - May be fatal if swallowed and enters airways
  H373 - May cause damage to organs through prolonged or repeated exposure.
  R36 - Irritating to eyes.
  R38 - Irritating to skin.
  R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  R65 - Harmful: may cause lung damage if swallowed.

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Key to abbreviations

NDA = No data available