

**Safety Data Sheet****GenFlex Roofing System****Section 1: Identification of the Substance/Mixture and of the Company/Undertaking****1.1 Product identifier**

**Product Name** • **EPDM Bonding Adhesive LVOC and EZ TPO Bonding Adhesive 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 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: Narcotic Effects - H336
- Reproductive Toxicity 2 - H361d
- Specific Target Organ Toxicity Repeated Exposure 2 - H373
- EUH066

**DSD/DPD**

- Highly Flammable (F)
- Irritant (Xi)
- Harmful (Xn)
- Substances Toxic To Reproduction - Category 3
- R11, R36, R48/20, 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
  - H336 - May cause drowsiness or dizziness
  - H361d - Suspected of damaging the unborn child.
  - H373 - May cause damage to organs through prolonged or repeated exposure.
  - 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.
  - P260 - Do not breathe 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 - Irritating to eyes.
  - R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  - 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

## DSD/DPD

hazardous.

- 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  
Acute Toxicity Inhalation 4 - H332  
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
  - Harmful if inhaled - H332
  - 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
  - Do not breathe mist/vapours/spray. - P260
  - 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
- 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 |
| Acetic acid, tert-butyl ester | <b>CAS:</b> 540-88-5<br><b>EC Number:</b> 208-760-7 | 25% TO 50% | Ingestion/Oral-Rat LD50 • 4100 mg/kg<br>Inhalation-Rat LC50 • >2230 mg/m <sup>3</sup> 4 Hour(s)<br>Skin-Rabbit LD50 • >2 g/kg | <b>EU DSD/DPD:</b> Annex I: F; R11; R66<br><b>EU CLP:</b> Annex VI: Flam. Liq. 2; H225; EUH066<br><b>OSHA HCS 2012:</b> Flam. Liq. 2; Acute Tox . 3 (Inhl.)                       | NDA      |
| Acetic acid, methyl ester     | <b>CAS:</b> 79-20-9<br><b>EC Number:</b> 201-185-2  | 25% TO 50% | Ingestion/Oral-Rat LD50 • >5 g/kg<br>Skin-Rabbit LD50 • >5 g/kg   | <b>EU DSD/DPD:</b> Annex I: F; R11; Xi; R36; R66; R67<br><b>EU CLP:</b> Annex VI: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3: Narc., H336; EUH066<br><b>OSHA HCS 2012:</b> | NDA      |

|                   |  |                   |   |  |     |
|-------------------|--|-------------------|---|--|-----|
| Toluene           | CAS:108-88-3<br>EC<br>Number:203-625-9 | 2.5%<br>TO<br>10% | Ingestion/Oral-Rat<br>LD50 • 636 mg/kg<br>Inhalation-Rat LC50 •<br>49 g/m³ 4 Hour(s)<br>Skin-Rabbit LD50 •<br>14100 µL/kg | EU DSD/DPD: Annex I: F; R11; Repr. 3; R63; Xn;<br>R48/20-65; Xi; R38; R67<br>EU CLP: Annex VI: Flam. Liq. 2, H225; Repr. 2,<br>H361d; Asp. Tox. 1, H304; STOT RE 2, H373; Skin<br>Irrit. 2, H315; STOT SE 3: Narc., H336<br>OSHA HCS 2012: Flam. Liq. 2; Repr. 2; Acute Tox. 4<br>(Oral); STOT SE 3: Narc.; Asp. Tox. 1; Eye Irrit. 2B | NDA |
| Phenolic<br>Resin | NDA                                    | 2.5%<br>TO<br>10% | NDA   | EU DSD/DPD: Data Lacking<br>EU CLP: Data Lacking<br>OSHA HCS 2012: Data Lacking  | NDA |

See Section 16 for full text of H-statements and R-phrases. 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. If signs/symptoms continue, get medical attention.

#### Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. 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

- Rinse mouth. Drink 1 - 2 glasses of water. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. 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

- LARGE FIRES: Water spray, fog or alcohol-resistant foam.  
SMALL FIRES: Dry chemical, CO2, water spray or alcohol-resistant foam.

#### 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. 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

- No data available

## 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

- Keep containers properly sealed in a cool, dry, well-ventilated area between 65-85F (18.3-29.4C). Do not store in open, unlabeled or mislabeled containers. Do not reuse empty container without commercial cleaning or reconditioning.

### 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/m <sup>3</sup> TWA     | 20 ppm TWA                                | 20 ppm TWA                               | 50 ppm TWA; 188 mg/m <sup>3</sup> TWA      |
| Acetic acid, methyl ester (79-20-9)      | STELs    | 250 ppm STEL                              | 250 ppm STEL; 757 mg/m <sup>3</sup> STEL  | 250 ppm STEL                              | 250 ppm STEL                             | 250 ppm STEL; 757 mg/m <sup>3</sup> STEL   |
|  | TWAs     | 200 ppm TWA                               | 200 ppm TWA; 606 mg/m <sup>3</sup> TWA    | 200 ppm TWA                               | 200 ppm TWA                              | 200 ppm TWA; 606 mg/m <sup>3</sup> TWA     |
| Acetic acid, tert-butyl ester (540-88-5) | TWAs     | 200 ppm TWA                               | 200 ppm TWA; 950 mg/m <sup>3</sup> TWA    | 200 ppm TWA                               | 200 ppm TWA                              | 200 ppm TWA; 950 mg/m <sup>3</sup> 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/m <sup>3</sup> STEL  | Not established                           | 150 ppm STEL; 560 mg/m <sup>3</sup> STEL  | Not established                          | Not established                            |
|  | TWAs     | 100 ppm TWA; 375 mg/m <sup>3</sup> TWA    | 20 ppm TWA                                | 100 ppm TWA; 375 mg/m <sup>3</sup> TWA    | 20 ppm TWA                               | 50 ppm TWAEV; 188 mg/m <sup>3</sup> TWAEV  |
| Acetic acid, methyl ester (79-20-9)      | STELs    | 250 ppm STEL; 760 mg/m <sup>3</sup> STEL  | 250 ppm STEL                              | 250 ppm STEL; 760 mg/m <sup>3</sup> STEL  | 250 ppm STEL                             | 250 ppm STEV; 757 mg/m <sup>3</sup> STEV   |
|  | TWAs     | 200 ppm TWA; 605 mg/m <sup>3</sup> TWA    | 200 ppm TWA                               | 200 ppm TWA; 605 mg/m <sup>3</sup> TWA    | 200 ppm TWA                              | 200 ppm TWAEV; 606 mg/m <sup>3</sup> TWAEV |
| Acetic acid, tert-butyl ester (540-88-5) | STELs    | 250 ppm STEL; 1187 mg/m <sup>3</sup> STEL | Not established                           | 250 ppm STEL; 1187 mg/m <sup>3</sup> STEL | Not established                          | Not established                            |
|  | TWAs     | 200 ppm TWA; 950 mg/m <sup>3</sup> TWA    | 200 ppm TWA                               | 200 ppm TWA; 950 mg/m <sup>3</sup> TWA    | 200 ppm TWA                              | 200 ppm TWAEV; 950 mg/m <sup>3</sup> TWAEV |
| Exposure Limits/Guidelines (Con't.)      |          |   |   |   |  |  |
|  | Result   | Canada Saskatchewan                       | Canada Yukon                              | Europe                                    | NIOSH                                    | OSHA                                       |
| Toluene (108-88-3)                       | STELs    | Not established                           | 150 ppm STEL; 560 mg/m <sup>3</sup> STEL  | 100 ppm STEL; 384 mg/m <sup>3</sup> STEL  | 150 ppm STEL; 560 mg/m <sup>3</sup> STEL | Not established                            |
|  | TWAs     | 50 ppm TWA                                | 100 ppm TWA; 375 mg/m <sup>3</sup> TWA    | 50 ppm TWA; 192 mg/m <sup>3</sup> TWA     | 100 ppm TWA; 375 mg/m <sup>3</sup> TWA   | 200 ppm TWA                                |
|  | Ceilings | Not established                           | Not established                           | Not established                           | Not established                          | 300 ppm Ceiling                            |
| Acetic acid, methyl ester (79-20-9)      | TWAs     | 200 ppm TWA                               | 200 ppm TWA; 610 mg/m <sup>3</sup> TWA    | Not established                           | 200 ppm TWA; 610 mg/m <sup>3</sup> TWA   | 200 ppm TWA; 610 mg/m <sup>3</sup> TWA     |
|  | STELs    | Not established                           | 250 ppm STEL; 760 mg/m <sup>3</sup> STEL  | Not established                           | 250 ppm STEL; 760 mg/m <sup>3</sup> STEL | Not established                            |
| Acetic acid, tert-butyl ester (540-88-5) | TWAs     | 200 ppm TWA                               | 200 ppm TWA; 950 mg/m <sup>3</sup> TWA    | Not established                           | 200 ppm TWA; 950 mg/m <sup>3</sup> TWA   | 200 ppm TWA; 950 mg/m <sup>3</sup> TWA     |
|  | STELs    | Not established                           | 250 ppm STEL; 1180 mg/m <sup>3</sup> STEL | Not established                           | Not established                          | Not established                            |

## 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**

ACGIH = American Conference of Governmental Industrial Hygiene

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

STEV = Short Term Exposure Value

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 | Light liquid with a characteristic odor. |
| Color                               | Light             | Odor                   | Characteristic                           |
| Odor Threshold                      | Data lacking      |                        |  |
| General Properties                  |                   |                        |  |
| Boiling Point                       | 57 C(134.6 F)     | Melting Point          | Data lacking                             |
| Decomposition Temperature           | Data lacking      | pH                     | Data lacking                             |
| Specific Gravity/Relative Density   | Data lacking      | Water Solubility       | Immiscible                               |
| Viscosity                           | Data lacking      | Explosive Properties   | Not explosive.                           |
| Oxidizing Properties:               | Not an oxidizer.  |                        |  |
| Volatility                          |                   |                        |  |
| Vapor Pressure                      | Data lacking      | Vapor Density          | Data lacking                             |
| Evaporation Rate                    | Data lacking      |                        |  |
| Flammability                        |                   |                        |  |
| Flash Point                         | -10 C(14 F)       | UEL                    | 16 %                                     |
| LEL                                 | 3.1 %             | Autoignition           | 455 C(851 F)                             |
| 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

- Oxidizing agents.

## 10.6 Hazardous decomposition products

- Carbon monoxide, carbon dioxide, and hydrocarbons.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

| Component Name                             | CAS      | Data  |
|--|----------|---|
| Toluene (2.5% TO 10%)                      | 108-88-3 | <b>Acute Toxicity:</b> orl-rat LD50:636 mg/kg; ihl-rat LC50:49 gm/m3/4H; skn-rbt LD50:14100 uL/kg;<br><b>Irritation:</b> eye-rbt 100 mg/30S rinse MLD; skn-rbt 435 mg MLD;<br><b>Reproductive:</b> ihl-rat TCLo:1500 ppm (7-20D preg) |
| Acetic acid, methyl ester (25% TO 50%)     | 79-20-9  | <b>Acute Toxicity:</b> orl-rat LD50:>5 gm/kg; skn-rbt LD50:>5 gm/kg;<br><b>Irritation:</b> eye-rbt 100 mg/24H MOD; skn-rbt 20 mg/24H MOD  |
| Acetic acid, tert-butyl ester (25% TO 50%) | 540-88-5 | <b>Acute Toxicity:</b> orl-rat LD50:4500 mg/kg; ihl-rat LC50:>2230 mg/m3/4H; skn-rbt LD50:>2 gm/kg;<br><b>Irritation:</b> skn-rbt 500 uL/24H MLD  |

| GHS Properties                   | Classification  |
|----------------------------------|---|
| <b>Acute toxicity</b>            | EU/CLP • Classification criteria not met<br>OSHA HCS 2012 • Acute Toxicity 4 (Inhalation) - ATEmix(Inhalation)=2.676mg/L  |
| <b>Aspiration Hazard</b>         | EU/CLP • Classification criteria not met<br>OSHA HCS 2012 • Classification criteria not met   |
| <b>Carcinogenicity</b>           | EU/CLP • Classification criteria not met<br>OSHA HCS 2012 • Classification criteria not met   |
| <b>Germ Cell Mutagenicity</b>    | EU/CLP • Classification criteria not met<br>OSHA HCS 2012 • Classification criteria not met   |
| <b>Skin corrosion/Irritation</b> | EU/CLP • Skin Irritation 2<br>OSHA HCS 2012 • Skin Irritation 2   |
| <b>Skin sensitization</b>        | EU/CLP • Classification criteria not met<br>OSHA HCS 2012 • Classification criteria not met   |
| <b>STOT-RE</b>                   | EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2<br>OSHA HCS 2012 • Classification criteria not met  |
| <b>STOT-SE</b>                   | EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects<br>OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation |

|                                      |   |
|--------------------------------------|---|
| <b>Toxicity for Reproduction</b>     | <b>EU/CLP • Toxic to Reproduction 2</b><br><b>OSHA HCS 2012 • Toxic to Reproduction 2</b>                 |
| <b>Respiratory sensitization</b>     | <b>EU/CLP • Classification criteria not met</b><br><b>OSHA HCS 2012 • Classification criteria not met</b> |
| <b>Serious eye damage/Irritation</b> | <b>EU/CLP • Eye Irritation 2</b><br><b>OSHA HCS 2012 • Eye Irritation 2A</b>                              |

**Route(s) of entry/exposure**

- Inhalation, Skin, Eye, Ingestion

**Potential Health Effects****Inhalation****Acute (Immediate)**

- Harmful if inhaled. 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.

**Other****Chronic (Delayed)**

- May cause damage to organs through prolonged or repeated exposure.

**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**

LC = Lethal Concentration

MOD = Moderate

LD = Lethal Dose

TC = Toxic Concentration

MLD = Mild

**Section 12 - Ecological Information****12.1 Toxicity**

| EPDM Bonding Adhesive LVOC and EZ TPO Bonding Adhesive LVOC |                           |            |         |                     |          |
|---|---------------------------|------------|---------|---------------------|----------|
| Dosage  | Species                   | Duration   | Results | Exposure Conditions | Comments |
| = 6.8 mg/L  | Water Flea: Daphnia magna | 48 Hour(s) | EC50    | NDA                 | Toluene  |
| = 28 mg/L   | Water Flea: Daphnia magna | 48 Hour(s) | NOEC    | NDA                 | 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.

## 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  |
| Toluene                       | 108-88-3 | Yes | Yes | Yes |
| Acetic acid, methyl ester     | 79-20-9  | Yes | Yes | Yes |
| Acetic acid, tert-butyl ester | 540-88-5 | Yes | Yes | Yes |

|                |     |    |    |    |
|----------------|-----|----|----|----|
| Phenolic Resin | NDA | No | No | No |
|----------------|-----|----|----|----|

| Inventory                     |          |            |             |           |           |      |
|-------------------------------|----------|------------|-------------|-----------|-----------|------|
| Component                     | CAS      | Canada DSL | Canada NDSL | EU EINECS | EU ELNICS | TSCA |
| Toluene                       | 108-88-3 | Yes        | No          | Yes       | No        | Yes  |
| Acetic acid, methyl ester     | 79-20-9  | Yes        | No          | Yes       | No        | Yes  |
| Acetic acid, tert-butyl ester | 540-88-5 | Yes        | No          | Yes       | No        | Yes  |
| Phenolic Resin                | NDA      | No         | No          | No        | No        | No   |

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

- Acetic acid, methyl ester 79-20-9 B2, D2B
- Acetic acid, tert-butyl ester 540-88-5 B2
- Toluene 108-88-3 B2, D2A, D2B

#### Canada - WHMIS - Ingredient Disclosure List

- Acetic acid, methyl ester 79-20-9 1 %
- Acetic acid, tert-butyl ester 540-88-5 1 %
- Toluene 108-88-3 1 %

### Environment

#### Canada - CEPA - Priority Substances List

- Acetic acid, methyl ester 79-20-9 Not Listed
- Acetic acid, tert-butyl ester 540-88-5 Not Listed
- Toluene 108-88-3 Priority Substance List 1 (substance not considered toxic)

## 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
- Acetic acid, tert-butyl ester 540-88-5 F; R11 R66
- 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 F R:11-66 S:(2)-16-23-25-29-33
- 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
- Acetic acid, tert-butyl ester 540-88-5 C
- 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
- Acetic acid, tert-butyl ester 540-88-5 S:(2)-16-23-25-29-33
- 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
- Acetic acid, tert-butyl ester 540-88-5 Not Listed
- Toluene 108-88-3 Not Listed

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 5000 lb final RQ (listed under Butyl acetate); 2270 kg final RQ (listed under Butyl acetate)
- 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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

- Acetic acid, methyl ester 79-20-9 Not Listed
- Acetic acid, tert-butyl ester 540-88-5 Not Listed
- 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 Not Listed
- 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
- Acetic acid, tert-butyl ester 540-88-5 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

- Acetic acid, methyl ester 79-20-9 Not Listed
- Acetic acid, tert-butyl ester 540-88-5 Not Listed
- 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
- Acetic acid, tert-butyl ester 540-88-5 Not Listed
- 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
- Acetic acid, tert-butyl ester 540-88-5 Not Listed
- Toluene 108-88-3 Not Listed

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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

- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5 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
- Acetic acid, tert-butyl ester 540-88-5
- Toluene 108-88-3

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

- Acetic acid, methyl ester 79-20-9 Not Listed
- Acetic acid, tert-butyl ester 540-88-5 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****Relevant Phrases (code & full text)**

- H304 - May be fatal if swallowed and enters airways
- R38 - Irritating to skin.
- R65 - Harmful: may cause lung damage if swallowed.

**Last Revision Date**

- 29/August/2013

**Preparation Date**

- 30/January/2012

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**Key to abbreviations**

NDA = No data available



