

EPDM ROOF PATCH REPAIR KIT INSTALLATION OVERVIEW

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READ THIS ENTIRE INSTRUCTION SET BEFORE STARTING

GENERAL INFORMATION

This guide has been designed to give the user a general overview of the application of the Best Materials fully-adhered EPDM roof patch kit. This Guide is intended as a broad reference and is not all-inclusive. Please visit

<http://www.bestmaterials.com/EPDM-Roofing.aspx> for additional information concerning any situations not covered herein.

Terms: See list of TERMS at the end of this document.

PRECAUTIONS

If the adhesive is not allowed to properly dry before EPMD is applied, gas bubbles or blisters may form under the membrane sheet. Smaller bubbles or blisters may subside over time.

Due to solvent flash off, condensation may form on freshly applied adhesive when the ambient temperature is near the dew point. If condensation develops, possible surface contamination may occur and the application of adhesive must be discontinued. Allow the surface to dry and when conditions allow apply a thin fresher coat at a coverage rate that is approximately half of the normal coverage rate of the previously coated surface.

Liquid adhesives and primers as well as their fumes are FLAMMABLE. Do not breathe in vapors. Maintain proper ventilation. Store these products away from heat, flame, or sparks. Do not smoke near these materials. Do not use indoors. A fire extinguisher must be present when these products are used.

Keep containers closed when not in use. Care must be exercised to ensure that open containers are not placed near fresh air intake ventilators on the roof. Avoid contact with eyes. Glasses, goggles, or a face shield are recommended for eye protection. If contact is made with the eyes, immediately flush with plenty of water for at least 15 minutes and contact a physician. Avoid contact with the skin. Nitrile chemically resistant gloves are supplied for hand protection. In case of contact with skin, thoroughly wash the affected area with soap and water.

THIS INFORMATION AS WELL AS INFORMATION CONTAINED IN THE SAFETY DATA SHEETS MUST BE REVIEWED PRIOR TO STORAGE, HANDLING OR USE OF THESE PRODUCTS.

ROOF SURFACE PREPARATION

The Best Materials fully-adhered roof patch system is designed as a small repair patch on an existing EPDM roof. It will also adhere to and waterproof wood, metal, plastic, fiberglass, rubber, masonry, brick, most painted surfaces, wood fiberboard, lightweight concrete.

The adhesive should NOT be applied to polystyrene insulation. Priming of a roof wood deck is not required. Application over any silicone contaminated surface will fail. All traces of any silicones must be removed.

Be sure the roof surface is clean, free of dust, dirt, rust, oil, grease, and loose material. The roof surface must be dry. The adhesive will not adhere to wet or damp surfaces. Any trapped moisture may vaporize and negatively affect the performance of the adhesive. Good roofing practice dictates that any ponding water be prevented. The roof surface should have a positive slope of at least 1/2": 12" to prevent ponding water conditions. Ponding water is defined as the presence of standing water within 24 hours of precipitation.

Again, before starting, please review the "Precautions" section at the beginning of these instructions.

TYPICAL TOOLS AND EQUIPMENT (not supplied)

Soft bristle push broom	Safety glasses	Masking Tape (optional)
Shear Scissors	Fire extinguisher	Permanent Marker
Utility / razor knife	9" Paint roller frame	Tape Measure
Caulk gun	Wood stir stick	

CLEANING

Clean all surfaces over which EPDM will be applied. The objective is to remove all surface contaminants and create a fresh bonding surface.

Broom, then clean with dish soap and water using a rag. TSP and Bleach are also effective. Remove any residue using a fresh rag and water. Then finally, clean again with EternaClean and a rag. The bonding surface should show no chalking (powder-like residue) or residual dirt. For any residual areas, burnishing with the 3M scrub pad is quick and effective.

MARKING

Using a tape measure, determine the size and area to be covered.

With a permanent marker, mark old roof area (perhaps - - - -) to indicate the outside edges of the new EPDM. Next, measure 3" inside each edge on the EPDM

box and mark. These two set of markings creates a "frame" that will be the location of the seam tape. In the center of the "frame" is the bonding adhesive area.

EPDM FITTING AND PRE-INSTALLATION

Any tears or irregular areas should be first addressed. Use a razor knife, cut along the tear edges to create smooth edge. Apply M1 adhesive sealant or bonding adhesive under any loose portion of the cut edge. Smooth and staple the edge so its flat. Bubbles are cut open with an X cut, and folded back. Then cleaned or repaired under them as needed. The flaps from the X-cut are glued back with adhesive.

Unroll the folded EPDM membrane over the substrate so that the sheet is in the desired position and is wrinkle free. Lay in the sun for a day (or more if cold) may be necessary to relax any folds. A hot air gun can accelerate this. Generally any remaining wrinkles can be rolled flat during the adhesion step.

After the EPDM membrane has relaxed, cut the membrane to the marked size on the roof. You can use shears to cut the membrane or a razor knife over a piece of wood.

ADHESIVE APPLICATION

DO NOT APPLY BA10 BONDING ADHESIVE IN THE OUTER 3" PERIMETER OF EPDM (outer edges). THIS IS THE SEAM AREA, AND THIS AREA IS TREATED SEPARATELY.

TEMPERATURES:

Membrane adhesives are designed to be applied when the ambient temperatures are 40F (4C) and rising. Do not apply if ambient temperature will drop below 32F (0C) before adhesive dries. Storage temperatures in excess of 90F (32C) may affect product shelf life. Should the Bonding Adhesive be stored at temperatures below 60F (15C), restore to room temperature prior to use. Do not store below 40F. In hot weather, do not leave sealed containers on roof for prolonged periods of time. In cold weather, keep material indoors, at room temperature until ready to use. For large or slow jobs stir adhesive can occasionally while applying using.

MIXING:

Before opening, shake the can of BA10 bonding adhesive to pre-mix. Open and stir thoroughly until all settled pigments are dispersed and the cement is uniform in color. Five (5) minutes stirring is recommended. These materials are sensitive to atmospheric moisture and heat will accelerate the effect of any moisture. Opened containers of Bonding Adhesive should be used within 48 hours of opening. Adhesive will begin to thicken after this point, makes it difficult, and eventually impossible, to control adhesive thickness.

APPLICATION:

Position the EPDM in place on the roof. Fold the ½ the sheet back onto itself like a blanket, so that one-half (1/2) of the sheet is exposed.

Apply the BA10 Bonding Adhesive to BOTH the exposed parts of the old substrate AND the new EPDM membrane. Apply at a rate of 120 square feet per gallon per surface. You can pour out of the can onto the two surfaces. Pour out about 1/10 of the 1G can on the each exposed surface in a lace pattern (1/5 G total).

You will this to even out the coating using the ½" nap solvent resistant roller supplied. Since the roller cover will be dry to start, you will need to put some extra bonding adhesive product on the roller at first and work it in.

Roll bonding adhesive to smooth it out, being careful not to roll onto the outer 3" perimeter area (seaming area). Again, do not apply or use Bonding Adhesive in the Seaming or Splice areas. The adhesive must be applied to 100% of both surfaces in an even coat without globs or puddles.

The 1-gallon can covers up to 60 square feet (that is the combination of the finished surface membrane and substrate together).

ASSEMBLY OF EPDM MEMBRANE

An open (exposure) time of 5 to 50 minutes is generally used before assembly. Bonding Adhesive must be allowed to dry until it does not string or stick to a dry finger touch.

Check the final position of the sheet. It cannot be repositioned after bonding.

Slowly roll and mate the coated membrane portion onto the adhesive-coated substrate while avoiding wrinkles and bubbles. 3 people are ideal for this. 2 lift the ends of the EPDM and pull it over slowly onto the substrate. The 3rd person uses a push broom, or their hand, to slowly push the membrane down onto the deck to prevent bubbles as the 2 surfaces are mated. If this is not clear, see installation videos at:

http://www.bestmaterials.com/video_EPDM.aspx#EPDM_Bonding_Adhesive_Application

Immediately brush down or roll the bonded portion of the sheet to achieve maximum contact. **DO NOT apply excessive pressure which may cause the membrane to wrinkle.**

Now, repeat the application of BA-10 bonding adhesive for the other half of the EPDM membrane and substrate, again being careful not to get adhesive in the seam areas.

With some substrate materials, swelling of the substrate may occur initially, but this will disappear after several days' exposure. Do not re-broom membrane in an attempt to remove swelling.

SEAMS

POSITIONING:

The membrane should be positioned and adhered so that the width of the seam is 3". Fold the edge of the sheet back to expose the seam area.

CLEANING (if needed):

If the EPDM membrane seam area is contaminated with any dirt, dust, or debris, clean the seam area with Eternaclean Cleaner before applying seam Primer.

PRIMING:

Shake bottle very well to mix primer.

Using the 3M Scotch-Brite scrub pad supplied, scrub the seam Primer to the seam area using back and forth strokes with light pressure until the seam surfaces attain a smooth appearance. Do not apply primer too thick, just a surface coating is needed. Allow the Primer to flash off. Do not apply primer to Seam Tape.

APPLYING SEAM TAPE TO SUBSTRATE:

Do not remove top release paper at this stage.

Alignment: The seam tape should protrude from the EPDM edge about 1/4".

Working inward from one corner, start applying seam tape, sticky side down. Use moderate hand pressure to gradually sweep the Seam Tape into place, taking care to keep air from being trapped under the tape as you progress to the other corner.

Repeat for each side. At the corners, create a full overlap. Do not cut short. Do not bond corner overlaps yet.

Corners: At the corners, overlap each piece fully.

Peel back the release paper from the bottom seam tape, and fold the top tape over to bond the two tapes in this area. Repeat for all corners.

Pre-Roll Tape: lightly roll all the seam tape area before removing release paper on the top.

BOND EPDM TO SEAM TAPE:

Fold the top membrane back onto the Seam Tape release paper surface.

(If the Seam Tape does not visibly extend beyond the leading seam edge, the membrane edge should be cut back slightly to expose one-quarter

inch (1/4") of Seam Tape). Starting at one corner, reaching under the EPDM membrane and begin to slowly pull the release paper away from the Seam Tape (at about a 45-degree angle to the seam). While removing the paper, sweep your hand across and along the seam to prevent any bubbles, fish-mouths or wrinkles.

ROLL SEAM: After all the release paper is removed, roll the entire length of the seam with the supplied hand roller. First, across the seam, then repeat again along the length of seam. Use a moderate pressure. This pressure flows the sealant slightly and fuses the sealant to the surfaces. Roll well to address any bubble or fish-mouth areas. If these are large, and cannot be rolled out, the area will have to have Coverstrip tape applied. Coverstrip can be purchase by the foot, here: <http://www.bestmaterials.com/detail.aspx?ID=16016>

SEAL SEAM EDGES: Apply a bead of M1 sealant along all EPDM/Seam edges. The M1 Sealant should cover an area from the deck surface to the upper cut edge of the EPDM. Pay particular attention to the corner areas where overlap of the seam tape was done. Tooling M1 is not necessary.

Hint: Use masking tape on the deck to create a clean finish line. Pull the masking tape immediately, before M1 skins.

MORE EPDM REPAIR METHODS AND DETAILS:

Navigate to this location at www.bestmaterials.com

[http://www.bestmaterials.com/EPDM-Roofing.aspx#EPDM Roofing Installation Instructions](http://www.bestmaterials.com/EPDM-Roofing.aspx#EPDM_Roofing_Installation_Instructions)

Application Overview Start-to-Finish Movie

Bonding Adhesives, General Instructions

Bonding Adhesives Movie Overview

Corner Flashing 4-Piece Method (uses Eternabond peel/stick flashing)

Corner Detail Option (other methods)

DekStrip, Flexible Flashing Installation (for transition areas)

EPDM Installation, Detailed Specifications

EPDM Insulation Fastening Video Instructions

EPDM Membrane Adhesion Overview (click, wait, start movie)

EPDM Membrane Installation Overview (click, wait, start movie)

EPDM Residential Roof Edge Details (click, wait, start movie)

EPDM Roof Installation Guide <--READ FIRST

EPDM Specs and Installation Details / Drawings

Flashing Details & Drawings, Commercial Roofing

Flashing Details & Drawings, Residential Roofing

Materials Estimator for Commercial Roofs (online calculator)

Materials Estimator for Small or RV Roofs (online calculator)

Metal Roof Retrofit Overview Brochure

Metal Roof Retrofit with EPDM, System Specs

RV Roof Repair Methods

RV Roof Replacement Pictorial (use together with above guides)
RV Slide Room Leak Repairs (movie link)
Seams and Seam Repairs (summary of all the options)
Seams, Basic Process For Creating New Seams using Doublestick
Seam / Lap Splice Creation Movie (click, wait, and start movie)
Seam Repair with Eternabond Movie (click, wait, and start movie)
Termination Details & Options (edge terminations)

TERMS

BONDING ADHESIVE: Adhesive used to adhere the field sheet to substrate, walls, and curbs. It should be thoroughly stirred before using.

EPDM MEMBRANE: Cured field sheet membrane applied to roof decks, walls, and flashings. Available in a variety of widths and lengths.

FISH MOUTH: A wrinkle is formed when an increasing amount of membrane is forced onto an area too small to accommodate the material. When the wrinkle ends at the edge of the material, a conical opening is formed called a Fish Mouth. Wrinkles and Fish Mouths in seams are not acceptable. They must be removed and covered with a Joint patch.

FLASH OFF: Allowing the solvents in the adhesives or primer to evaporate, leaving the material in a tacky, not wet or stringy condition, before mating the two surfaces together. If the proper Flash Off time is not allowed, blisters will form in the membrane. Blisters will not harm the membrane and over time, will usually disappear.

MEMBRANE CLEANER: Whenever mating two surfaces of membrane, both surfaces should be cleaned with Eternaclean or Toluene. Used for cleaning metal drip edge after it has been sanded, prior to applying Cover Strip. Also used to clean seam edges prior to applying Lap Sealant.

SEAM TAPE: Butyl Tape used to splice two layers of membrane into a watertight seam.

SEAM TAPE PRIMER: Solvent based primer used to clean and prime EPDM membrane before applying Seam Tape or any Cured or Uncured Tape Backed membrane. Applied using a scratch pad. DO NOT APPLY PRIMER DIRECTLY TO SEAM TAPE. Primer is only applied to surface being prepared to accept Tape products.

SUBSTRATE: The surface on which the membrane is applied (insulation, walls, etc.).

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 Primer

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 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
- Eye Irritation 2 - H319
- Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
- EUH066

DSD/DPD

- Highly Flammable (F)
- Irritant (Xi)
- Harmful (Xn)
- R11, R36/38, R65, R66, 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
 - H319 - Causes serious eye irritation
 - H336 - May cause drowsiness or dizziness
 - EUH066 - Repeated exposure may cause skin dryness or cracking.

Precautionary statements

- Prevention**
- 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.
 - P261 - Avoid breathing mist/vapours/spray.
 - P264 - Wash thoroughly after handling.
 - P243 - Take precautionary measures against static discharge.
 - P271 - Use only outdoors or in a well-ventilated area.
 - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- 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.
 - P362 - Take off contaminated clothing and wash before reuse.
 - P332+P313 - If skin irritation occurs: Get medical advice/attention.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - P331 - Do NOT induce vomiting.
- 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.
 - R36/38 - Irritating to eyes and skin.
 - R65 - Harmful: may cause lung damage if swallowed.
 - 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.

2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD**
- According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Flammable Liquids 2 - H225

Aspiration 1 - H304
 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

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Highly flammable liquid and vapour - H225
 - May be fatal if swallowed and enters airways - H304
 - Causes skin irritation - H315
 - Causes serious eye irritation - H319
 - May cause respiratory irritation - H335
 - May cause drowsiness or dizziness - H336

Precautionary statements

- Prevention**
- 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
- 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
 - Take off contaminated clothing and wash before reuse. - P362
 - If skin irritation occurs: Get medical advice/attention. - P332+P313
 - 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 SWALLOWED: Immediately call a POISON CENTER or doctor/physician. - P301+P310
 - Do NOT induce vomiting. - P331
- Storage/Disposal**
- Store in a well-ventilated place. Keep container tightly closed. - P403+P233
 - Keep cool. - 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 - D2B

2.2 Label elements

WHMIS



- Flammable Liquids - B2
- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
1-Chloro-4-(trifluoromethyl) benzene	CAS:98-56-6 EINECS:202-681-1	30% TO 60%	Ingestion/Oral-Rat LD50 • 13 g/kg Inhalation-Rat LC50 • 22 g/m ³	EU DSD/DPD: Self Classified: R10, Xi, R36/38 EU CLP: Self Classified: Flam. Liq. 3, H226; Skin Irrit. 2, H315; Eye Irrit. 2, H319 OSHA HCS 2012: Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2	NDA
Naphtha (petroleum), hydrotreated light	CAS:64742-49-0 EINECS:265-151-9	10% TO 40%	NDA	EU DSD/DPD: Annex VI, Table 3.2: Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65 EU CLP: Annex VI: Carc. 1B, H350; Muta. 1B, H340; Asp. Tox. 1, H304 OSHA HCS 2012: Asp. Tox. 1	Component contains less than 0.1% benzene. Carcinogen and mutagen classifications do not apply for EU agencies.
Acetone	CAS:67-64-1 EINECS:200-662-2	10% TO 40%	Inhalation-Rat LC50 • 50100 mg/m ³ 8 Hour(s) Ingestion/Oral-Rat LD50 • 5800 mg/kg	EU DSD/DPD: Annex VI, Table 3.2: 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; STOT SE 3: Resp. Irrit.; STOT SE 3: Narc.	NDA

See Section 11 for Toxicological Information. See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

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

- 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

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Cool fire exposed containers with water. Move containers from fire area if you can do it without risk.

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. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist/vapours/spray. Avoid contact with skin, eyes, and clothing. Use only in well ventilated areas. 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. Do not eat, drink or smoke when using this product. After handling wash hands thoroughly.

7.2 Conditions for safe storage, including any incompatibilities

Storage

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

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
Acetone (67-64-1)	STELs	750 ppm STEL	750 ppm STEL; 1800 mg/m ³ STEL	500 ppm STEL	750 ppm STEL	750 ppm STEL; 1782 mg/m ³ STEL
	TWAs	500 ppm TWA	500 ppm TWA; 1200 mg/m ³ TWA	250 ppm TWA	500 ppm TWA	500 ppm TWA; 1188 mg/m ³ TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec
Acetone (67-64-1)	STELs	1250 ppm STEL; 2970 mg/m ³ STEL	750 ppm STEL	1250 ppm STEL; 2970 mg/m ³ STEL	750 ppm STEL	1000 ppm STEV; 2380 mg/m ³ STEV
	TWAs	1000 ppm TWA; 2370 mg/m ³ TWA	500 ppm TWA	1000 ppm TWA; 2370 mg/m ³ TWA	500 ppm TWA	500 ppm TWAEV; 1190 mg/m ³ TWAEV
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Saskatchewan	Canada Yukon	NIOSH	OSHA	

Acetone (67-64-1)	TWAs	500 ppm TWA	1000 ppm TWA; 2400 mg/m ³ TWA	250 ppm TWA; 590 mg/m ³ TWA	1000 ppm TWA; 2400 mg/m ³ TWA
	STELs	Not established	1250 ppm STEL; 3000 mg/m ³ STEL	Not established	Not established

8.2 Exposure controls

Engineering Measures/Controls

- This material is designed to be used outdoors, in roofing applications. Good general ventilation should be used. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

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

Eye/Face

- Wear appropriate eye/face protection for the job/activity.

Skin/Body

- Wear appropriate gloves for the job/activity.

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

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	Amber liquid with characteristic odor.
Color	Amber	Odor	Characteristic
Odor Threshold	Data lacking		
General Properties			
Boiling Point	133 F(56.1111 C)	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	1.01 Water=1	Density	8.42 lbs/gal
Water Solubility	Insoluble	Viscosity	Data lacking
Explosive Properties	Not explosive.	Oxidizing Properties:	Not an oxidizer.
Volatility			
Vapor Pressure	175 mmHg (torr) @ 20 C(68 F)	Vapor Density	Data lacking
Evaporation Rate	Data lacking	VOC (Vol.)	88.1 %
Flammability			
Flash Point	-4 F(-20 C)	UEL	13 %
LEL	2.6 %	Autoignition	Data lacking
Flammability (solid, gas)	Flammable Liquid.		
Environmental			

Octanol/Water Partition coefficient	Data lacking		
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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

- No data available

10.6 Hazardous decomposition products

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

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
1-Chloro-4-(trifluoromethyl) benzene (30% TO 60%)	98-56-6	Acute Toxicity: orl-rat LD50:13 gm/kg; ihl-rat LC50:22 gm/m3; Multi-dose Toxicity: ihl-rat TCLo:500 ppm/6H/4W-I
Acetone (10% TO 40%)	67-64-1	Acute Toxicity: orl-rat LD50:5800 mg/kg; ihl-rat LC50:50100 mg/m3/8H; Irritation: eye-rbt 20 mg SEV; skn-rbt 395 mg open MLD; Reproductive: ihl-rat TCLo:11000 ppm (6-19D preg)

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Aspiration 1 OSHA HCS 2012 • Aspiration 1
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 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 • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
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 2

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

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)

- 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.

Key to abbreviations

LC = Lethal Concentration

TC = Toxic Concentration

LD = Lethal Dose

SEV = Severe

MLD = Mild

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	III	NDA
TDG	UN1133	ADHESIVES	3	III	Potential Marine Pollutant
IMO/IMDG	UN1133	ADHESIVES	3	III	NDA
ADN	UN1133	ADHESIVES	3	III	NDA
ADR/RID	UN1133	ADHESIVES	3	III	NDA
IATA/ICAO	UN1133	Adhesives	3	III	NDA

14.6 Special precautions for user

- None 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
1-Chloro-4-(trifluoromethyl) benzene	98-56-6	No	No	No
Acetone	67-64-1	Yes	Yes	Yes
Naphtha (petroleum), hydrotreated light	64742-49-0	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
1-Chloro-4-(trifluoromethyl)	98-56-6	Yes	No	Yes	No	Yes

benzene						
Acetone	67-64-1	Yes	No	Yes	No	Yes
Naphtha (petroleum), hydrotreated light	64742-49-0	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	B2, D2B

Canada - WHMIS - Ingredient Disclosure List

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	1 %

Environment

Canada - 2004 NPRI (National Pollutant Release Inventory)

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

Canada - 2005 NPRI (National Pollutant Release Inventory)

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

Canada - CEPA - Greenhouse Gases Subject to Mandatory Reporting

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

Canada - CEPA - Priority Substances List

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

Canada - DWQ (Drinking Water Quality) - IMACs

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

Other

Canada - Accelerated Reduction/Elimination of Toxics (ARET)

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

Canada New Brunswick

Environment

Canada - New Brunswick - Ozone Depleting Substances - Schedule A

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

Canada - New Brunswick - Ozone Depleting Substances - Schedule B

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65
• Acetone	67-64-1	F; R11 Xi; R36 R66 R67

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	T R:45-46-65 S:53-45
• Acetone	67-64-1	F Xi R:11-36-66-67 S:(2)-9-16-26

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	P
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	S:53-45
• Acetone	67-64-1	S:(2)-9-16-26

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
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• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	5000 lb final RQ; 2270 kg final RQ
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Included in waste stream: F039
U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	
U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	
U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards		
• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	0.28 mg/L (wastewater); 160 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
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	

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
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	waste number U002 (Ignitable waste)

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	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
• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	

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

• 1-Chloro-4-(trifluoromethyl) benzene	98-56-6	Not Listed
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• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H226 - Flammable liquid and vapour
- H340 - May cause genetic defects.
- H350 - May cause cancer.
- R10 - Flammable.
- R36 - Irritating to eyes.
- R45 - May cause cancer.
- R46 - May cause heritable genetic damage.

Last Revision Date

- 11/March/2014

Preparation Date

- 11/January/2012

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No data available

EMERGENCY CONTACTS

Call Chemtrec: USA: 1-800-424-9300
International: (703) 527-3887

Section 1. Product and Company Information

Product Name	M-1 Structural Sealant	CHEM LINK INC. 353 E. Lyons Street Schoolcraft, MI 49087 U.S.A. Tel: 269-679-4440 Fax: 269-679-4448
Chemical Family	Silyl terminated polyether	
Product Use	Moisture cure sealant	
MSDS Prepared	02/07/11	
MSDS Prepared by	James Larke	

Section 2. Composition / Information on Ingredients**HAZARDOUS INGREDIENTS**

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>Concentration</u>
Amino Silane	1760-24-3	1 – 5%

Section 3. Hazards Identification**HMIG****EMERGENCY OVERVIEW**

<u>Health</u>	1
<u>Flammability</u>	0
<u>Reactivity</u>	0
<u>Protective</u>	
<u>Equipment</u>	B

Human Effects and Symptoms of Exposure

Routes of Entry – Dermal contact, Eye.

Acute Eye Contact – Direct contact can cause severe irritation.

Acute Skin Contact – Direct contact may cause slight irritation.

Skin Absorption – Not Toxic.

Acute Inhalation – Product is extremely low in volatility and therefore not likely to pose a problem from inhalation.

Acute Ingestion – May be harmful if ingested, not a likely route of entry.

Chronic Effects of exposure – Repeated or prolonged direct contact to the eyes may cause chemical burns. Repeated or prolonged direct contact to the skin may cause a dermatitis.

Medical Conditions Aggravated by exposure – Preexisting skin and eye disorders may be aggravated by direct contact to this product.

Carcinogenicity – There are no components in this product that are listed as a carcinogen by NTP, IARC, ACGIH or OSHA.

Section 4. First Aid Measures

First Aid For Eyes – Flush with large amounts of water for at least 15 minutes. Consult a physician if ill effects or irritation occurs.

First Aid For Skin – Clean product from affected area with Ethyl alcohol, then wash with soap and water.

First Aid for Inhalation – An unlikely route of entry. Remove to fresh air. Consult a physician.

First Aid For Ingestion – An unlikely route of entry. Consult a physician.

Section 5. Fire Fighting Measures

Special Fire Fighting Instructions – None. Full emergency equipment with self – contained breathing apparatus and full protective clothing should be worn by firefighters.
Extinguishing Media – Water, CO₂, Dry Chemical, Foam.
Unusual Fire and Explosion Hazards – None. This product is not considered flammable.
Flashpoint – Not applicable.
Upper Flammable Limit – Not applicable.
Lower Flammable Limit – Not applicable.
Autoignition temperature – Not applicable.
Sensitivity to Impact – Not applicable.
Sensitivity to Static Discharge – Not applicable.
Hazardous Combustion Products – Thermal decomposition may produce toxic fumes of Carbon Monoxide and/or Carbon dioxide.

Section 6. Accidental release measures

Personal Precautions – Use personal protection recommended in section 8.
Methods For Cleaning Up – Collect spill with absorbent material such as cardboard and place into a container approved for waste disposal.

Section 7. Handling and Storage

Handling – Use personal protection recommended in section 8. Avoid eye, skin and clothing contact.
Storage – Store in a cool dry area (this product polymerizes when in contact with moisture.)

Section 8. Exposure Controls / Personal Protection

Exposure Guidelines – No established limits.
Engineering controls – No specific controls are needed.
Personal Protective Equipment:
 Eye Protection – Wear safety glasses or goggles to avoid eye contact.
 Skin Protection – Wear impervious gloves such as vinyl to minimize contact with skin.
 Respiratory Protection – Not required.
 Work/Hygienic Practices – Avoid contact with eyes and skin. Wash thoroughly after handling and before eating or drinking.

Section 9. Physical and Chemical Properties

Physical State.....Paste.(reacts with moisture to become a firm synthetic rubber)
Odor and appearanceMild ester odor, thick paste of various colors.
pH.....Not established.
Specific Gravity.....Varies from color to color. All colors are heavier than water.
Density.....~ 11.7 lbs/gal.
Vapor Density (air = 1).....> 1
Vapor Pressure (mmHg).....Not established.
Evaporation Rate.....Not Applicable.

Section 9. Physical and Chemical Properties (continued)

Boiling Point.....Not established.
Freezing Point.....Not established.
Coefficient of Water/Oil Distribution...Not established
Viscosity.....~ 1,000,000 cP

Section 10. Stability and Reactivity

Stability – Considered Stable.
Conditions to Avoid – None known
Incompatible Materials – None known.
Hazardous Decomposition Products – None known.
Hazardous polymerization – Will not occur.
Reactivity – Hazardous reaction will not occur.

Section 11. Toxicological Information

Information below is based on Amino Silane (refer to sections 2.and 3.)

Oral – Result: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.
Skin Absorption – Result: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.
Skin Direct contact – Result: Slight irritation.
Eye Direct contact – Result: Severe irritation. Remark: Causes corneal injury.
Inhalation – Result: LC50 Not acutely Toxic.
Exposure Limits – Not applicable.
Sensitization – No.
Reproductive Toxicity – No.
Mutagenicity – No.
Teratogenicity – No
Synergistic Products – None.

Section 12. Ecological Information

No known applicable information.

Section 13. Disposal Considerations

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
This product becomes a firm synthetic rubber when cured. Please allow to cure before disposal.

Section 14. Transport Information

Special Shipping Information – None.
DOT – Not regulated.
TDG – Not available.
PIN – Not available.

Section 15. Regulatory Information

OSHA 29 CFR 1910-1200 – Irritant.

TSCA – All components of this product are listed on TSCA Inventory.

CERCLA Reportable Quantity – Not applicable.

SARA Title III:

Section 302 Extremely Hazardous Substances – None.

Section 304 – Not applicable.

Section 311/312 – Immediate (acute) health hazard.

Section 313 – None.

RCRA – Refer to section 13.

California Proposition 65 – To the best of our knowledge this product contains no levels of listed substances which the state of California has found to cause cancer, birth defects or other reproductive harm.

WHIMS Classification – D2B

Section 16. Other Information

Prepared in accordance with 29 CFR 1910.1200

This Product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

M-1 is a trademark of Chem Link Inc.

To the best of our knowledge, the information contained herein is accurate. However Chem Link Inc. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be handled with care. Although we have described herein all of the hazards to which we are currently aware, we cannot guarantee that these are the only hazards which exist.

Provided by: ETERNABOND, INC.
 175 N. Archer Ave.
 Mundelein, IL 60060
 847-837-9400

This form is designed to meet the requirements of the U.S. Labor Department OSHA form no 174.

Section I: Product & Company Identification

Product: **ETERNABOND ETERNACLEAN SPRAY**
 24 Hour Emergency Assistance – Infotrac (800)-535-5053

Section II: Composition/Information on Ingredients

Component	CAS Number	% by Weight
Acetone	67-64-1	45-55
Toluene	108-88-3	25-35
Methanol	67-56-1	10-20
Carbon dioxide	124-38-9	5-10

Section III: Hazards Identification

Emergency Overview

Appearance & Odor: Clear, water-white liquid.

Danger: Extremely flammable. Vapor harmful. Harmful or fatal if swallowed. May be fatal or cause blindness if swallowed. Eye and skin irritant. Contents under pressure.

Potential Health Effects:

- Eye: Moderate eye irritant. Exposure can cause irritation including stinging, tearing, redness, blurred vision, and swelling of the eyes.
- Skin: Moderate skin irritant. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of the skin, and skin burns. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.
- Inhalation: Breathing large amounts of this material may be harmful. Symptoms include irritation of the nose and throat and central nervous system excitation (giddiness), followed by CNS depression (dizziness, drowsiness, weakness, headache, nausea, unconsciousness.)
- Ingestion: Swallowing small amounts is not likely to cause harmful effects. May cause stomach or intestinal upset. Swallowing larger amounts may be harmful as this material may be aspirated into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.
- Chronic Effects: Overexposure to methanol may lead to visual impairment.
- Target Organs: Liver, kidneys, blood, central nervous system, eyes.
- Medical Conditions
- Aggravated by Exposure: Skin sensitivities, lung conditions, central nervous system conditions.

Section IV: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.
 Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.
 Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
 Ingestion: Seek medical attention. Do not induce vomiting unless instructed by a medical personnel. Have victim drink a glass of water if conscience.
 Note to Physicians: This material is an aspiration hazard. This material (or a component) has produced hyperglycemia and ketosis, following substantial ingestion. Inhalation of high concentrations of this material may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This product contains methanol. The metabolites of methanol can cause metabolic acidosis, visual disturbances and blindness.

Section V: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions (16 CFR 1500.3(c)(6)).
 Flashpoint: < 0°F Method: TCC LEL: 2.6 UEL: 12.8
 Autoignition Temperature: 725 F
 Suitable Extinguishing Media: Dry chemical, carbon dioxide, alcohol-resistant foam, class B extinguishers.
 Products of Combustion: Oxides of carbon.
 Protection of Fire-Fighters: Fire-fighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Vapors are heavier than air and will accumulate near the ground. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section VI: Accidental Release Measures

Personal Precautions: Use personal protection recommendation in Section 8.
 Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.
 Methods for Containment
 7 Clean-up: Eliminate sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in a confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section VII: Handling and Storage

Handling Procedures: Do not use near potential sources of ignition. Do not use on energized equipment. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid inhaling vapors.
 Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.
 Aerosol Level: III

Section VIII: Exposure Controls/Personal Protection

Exposure Guidelines:

OSHA		ACGIH			OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Acetone	1000	NE	500	750	NE		ppm
Toluene	200	300(c)	20	NE	NE		ppm
Methanol	200	NE	200	250(s)	NE		ppm
Carbon dioxide	5000	30000(v)	5000	30000	NE		ppm

NE – Not Established (c) – ceiling (s) – skin (v) – vacated

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/Face Protection: For normal conditions, wear safety glasses. Where there is a reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVA, or neoprene. Also, use full protective clothing if there is a prolonged or repeated contact of liquid with skin.

Section IX: Physical & Chemical Properties

Physical State: liquid
 Color: clear
 Odor: solvent
 Specific Gravity: 0.814
 Initial Boiling Point: 132F
 Freezing Point: ND
 Vapor Pressure: ND
 Vapor Density: >1 (air = 1)
 Evaporation Rate: >1 (butyl acetate = 1)
 Solubility: slightly soluble in water
 pH: NA
 Volatile Organic Compounds wt %: 43.8 g/L: 356.5 lbs./gal: 2.97

Section X: Stability and Reactivity

Stability: Stable
Conditions to Avoid: Sources of ignition; temperature extremes
Incompatible Materials: Acids, alkalis, reducing agents, strong oxidizing agents, hypochlorites, peroxides, reactive metals such as aluminum and magnesium, sodium, zinc
Hazardous Decomposition Products: Oxides of carbon, various hydrocarbons
Possibility of Hazardous Reactions: No

Section XI: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Effects:

Component	Test	Result	Route	Species
Acetone	LD50	5800 mg/kg	Oral	Rat
Acetone	LD50	16,000 ppm/4H	Inhalation	Rat
Acetone	LD50	20,000 mg/kg	Dermal	Rabbit
Methanol	LD50	5045 mg/kg	Oral	Rat
Methanol	LD50	12,800 mg/kg	Dermal	Rabbit

Chronic Effects:

Carcinogenicity:	Component Result
OSHA:	None listed
IARC:	None listed
NTP:	None listed
Mutagenicity:	No information available

Section XII: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity:	Acetone – 48H LC50 Daphnia: 10 mg/l
Persistence/Degradability:	No information available
Bioaccumulation/Accumulation:	No information available
Mobility in Environment:	No information available

Section XIII: Disposal Considerations

Disposal: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with the following potential waste code(s): D001, F003, F005 (See 40 CFR Part 261.20 – 261.33). Aerosol containers should be fully emptied and depressurized before disposal. All disposal activities must comply with federal, state, and local regulations. Local regulations may be more stringent than state or national requirements.

Section XIV: Transportation Information

Proper shipping description:
 US DOT (ground): Consumer Commodity, ORM-D
 Special Provisions: None

Section XV: Regulatory Information**U.S. Federal**Toxic Substances Control Act (TSCA)

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Reportable Quantities (RQ's) exist for the following ingredients:

Acetone (5000 lbs), Toluene (1000 lbs), Methonal (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to you Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazardous Categories: Fire Hazard Yes

Reactive Hazard: No

Release of Pressure: Yes

Acute Health Hazard: Yes

Chronic Health Hazard: No

Section 313 Toxic Chemicals

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Toluene(<30%), Methonal (<20%)

Clean Air Act

Section 112 Hazardous Air Pollutants (HAPs): Toluene, Methonal

State RegulationsCalifornia Safe Drinking Water and Toxic Enforcement Act (Prop 65)

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: Toluene

State Right to Know:

New Jersey: 67-64-1, 108-88-3, 67-56-1, 124-3

Pennsylvania: 67-64-1, 108-88-3, 67-56-1, 124-3

Massachusetts: 67-64-1, 108-88-3, 67-56-1, 124-3

Rhode Island: 67-64-1, 108-88-3, 67-56-1, 124-3

Additional Regulatory Information

None

NFPA: Health: 2 Flammability: 3 Reactivity: 0

HMIS: Health: 2 Flammability: 3 Reactivity: 0

Prepared By: Michelle Rudnick Date: 09/01/2009

Technical Information: (800) 521-3168 CRC #: 594M-Q

Changes since last revision: MSDS reformatted in accordance with ANSI Z400.1-2004

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS: Chemical Abstract Service

ppm: Parts per Million

TCC: Tag Closed Cup

LEL: Lower Explosive Limit

UEL: Upper Explosive Limit

PPE: Personal Protection Equipment

COC: Cleveland Closed Cup

TWA: Time Weighted Average

ACGIH: American Conference of Gov. Ind. Hygienists

NIOSH: National Institute of Occupational Safety & Health

NA: Not Applicable

ND: Not Determined

NE: Not Established

g/L: grams per Liter

lbs./gal: pounds per gallon

RQ: Reportable Quantity

PMCC: Pensky-Martens Closed Cup

OSHA: Occupational Safety and Health Admin.

STEL: Short Term Exposure Limit

SAFETY DATA SHEET



Nemeon, Incorporated
6043 Hudson Road Suite 350
Woodbury, MN 55125
www.nemeon.com

Page: 1

1. CHEMICAL PRODUCT & MANUFACTURER:

BONDLINE ADHESIVES, INC.
500 N. WOODS AVENUE
EVANSVILLE, IN 47712
812-423-4651 FAX 812-422-2662

PRODUCT: Lionguard LG-BA10 Neo Bonding Adhesive
GHS PRODUCT ID: Lionguard LG-BA10 Neo Bonding Adh
Recommended for use as: EPDM/TPO bonding adhesive
Restrictions on use:

PRODUCT NAME: Lionguard LG-BA10 Neo Bonding Adhesive
CHEMICAL FAMILY: HYDROCARBON

MANUFACTURER/DISTRIBUTOR:
SAME AS ABOVE

TELEPHONE:
SAME AS ABOVE

24 HOUR EMERGENCY CONTACT NUMBER: PERS 1-800-728-2482 PERS ID#3624

2. HAZARDS IDENTIFICATION:

GHS Rating (1=Most Severe 4=Least Severe): HEALTH 2 FLAMMABILITY 2 REACTIVITY 0



DANGER

- Highly flammable liquid and vapor. (H225)
- Causes skin irritation. (H315)
- May be fatal if swallowed and enters airways. (H304)
- May cause drowsiness or dizziness. (H336)

Precautionary Statement(s):

- Do not handle until all safety precautions have been read and understood (P202)
- Store in a well-ventilated place. Keep containers tightly closed. Keep cool. (P403 + P233+P235)
- Keep away from heat/sparks/open flames/hot surfaces-No smoking. (P210)
- Ground/bond container and receiving equipment. Take precautionary measures against static discharge. (P240+P243)
- IF SWALLOWED: Immediately call a POISON CENTER. Get medical advice/attention. (P301 +P310+ P313)
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing ((P304 + PP340)
- If on skin (or hair): Remove/Take-off immediately all contaminated clothing. Rinse skin with water/shower. (P303+ P361+P353)
- Do NOT induce vomiting. (P331)

- Wear protective gloves/protective clothing.** Manufacturer/supplier or the competent authority to specify type of equipment (P280)
- Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools (P241 + P242)
- Dispose of contents/container to approved disposal facility. (P501)
- Avoid breathing dust/fume/gas/mist/vapors/spray (P261)
- In case of fire: Use NFPA Class B extinguishers. If water is used, use fog nozzles. (P370 + P378)

3. COMPOSITION & PRODUCT INFORMATION ON HAZARDOUS INGREDIENTS: ACGIH

	WT%	CAS#	TLV-8 HR/TWA
ACETONE	10.68	67-64-1	750 PPM
TOLUENE	51.87	108-88-3	20 PPM
HEXANE	9.61	110-54-3	50 ppm

4. FIRST AID MEASURES:

INHALATION: REMOVE TO FRESH AIR IF OVERCOME. IF BREATHING HAS STOPPED BEGIN CPR. CALL A PHYSICIAN AT ONCE.

EYE CONTACT: FLUSH WITH WATER FOR 15 MINUTES.

SKIN CONTACT: WASH WITH HAND CLEANER; FOLLOW WITH SOAP AND WATER.

PERSONAL PROTECTION: ACGIH STEL: 50 PPM

RESPIRATORY PROTECTION: VENTILATE TO KEEP VAPORS BELOW THRESHHOLD LIMIT VALUES. NIOSH APPROVED RESPIRATORS FOR AREAS OF CONCENTRATED VAPORS.

EYES: SPLASH GOGGLES FOR LIQUID PRODUCTS

GLOVES: MUST BE IMPERVIOUS TO SOLVENTS

INGESTION: DO NOT INDUCE VOMITING. CALL PHYSICIAN AT ONCE.

NOTE TO PHYSICIAN: CONTAINS PETROLEUM DISTILLATES.

PRIMARY ROUTES OF ENTRY: INHALATION, SKIN

5. FIRE FIGHTING MEASURES:

FLASHPOINT, TAG CLOSED CUP: -4 F

GENERAL HAZARD: EXTREMELY FLAMMABLE. MAY FORM COMBUSTIBLE OR EXPLOSIVE MIXTURES WITH AIR. CLOSED CONTAINERS MAY EXPLODE IF EXPOSED TO EXTREME HEAT. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL CONSIDERABLE DISTANCES TO IGNITION SOURCES AND FLASH BACK.

FIRE FIGHTING INSTRUCTIONS: WATER SPRAY MAY BE INEFFECTIVE BUT MAY BE USED TO COOL CLOSED CONTAINERS. IF WATER IS USED, USE FOG NOZZLES.

FIRE FIGHTING EQUIPMENT: NFPA CLASS B EXTINGUISHERS (CO₂, FOAM, DRY CHEMICAL) AND SELF-CONTAINED BREATHING APPARATUS

COMBUSTION PRODUCTS: SMOKE, NORMAL COMBUSTION PRODUCTS.

6. ACCIDENTAL RELEASE MEASURES:

LAND SPILL: REMOVE ALL SOURCES OF IGNITION, VENTILATE AREA AND REMOVE MATERIAL WITH ABSORBENTS AND/OR NON-SPARKING TOOLS.

WATER SPILL: USE ABSORBENT BOOMS TO DIKE AREA AND MINIMIZE AREA OF CONTAMINATION.

7. STORAGE AND HANDLING:

STORAGE TEMPERATURE: AMBIENT

STORAGE PRESSURE: ATMOSPHERIC

GENERAL: KEEP MATERIAL AWAY FROM HEAT, SPARK AND OPEN FLAME. DO NOT STORE IN OPEN OR UNLABELED CONTAINERS. USE WITH ADEQUATE VENTILATION. DO NOT STORE ABOVE 120F
STATIC ACCUMULATOR: THIS MAY FORM AN IGNITABLE VAPOR/AIR MIXTURE IN CLOSED TANKS OR CONTAINERS. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS. DO NOT CUT, BRAZE OR WELD. **FOR INDUSTRIAL USE ONLY. KEEP OUT OF THE REACH OF CHILDREN.**
READ PRODUCT LABEL AND OBSERVE ALL PRECAUTIONS BEFORE USE.

8. EXPOSURE CONTROL/PERSONAL PROTECTION :

ENGINEERING CONTROLS: LOCAL EXHAUST: PREFERABLE
MECHANICAL EXHAUST: ACCEPTABLE-USE ONLY
CLASS I GROUP D APPROVED DEVICES.

9. PHYSICAL AND CHEMICAL PROPERTIES:

SPECIFIC GRAVITY: .866	FLASH POINT: TAG CLOSED CUP: -4 F
DENSITY: (IN LBS): 7.22	VAPOR PRESSURE AT 20C (MM OF HG): 181
VAPOR DENSITY: 2.0	(VOC) CONTENT: 680.33 g/liter
EVAPORATION RATE (nBuAc=1): 5.6	APPEARANCE: yellow liquid
SOLUBILITY IN WATER: NIL	ODOR: CHARACTERISTIC HYDROCARBON SOLVENT
BOILING RANGE (F): 133	ODOR THRESHOLD: NO DATA
PHYSICAL STATE: Liquid	PH: NOT APPLICABLE
% VOLATILE BY VOLUME:	MELTING POINT/FREEZING POINT: -138 F
AUTOIGNITION TEMPERATURE: 869F	PARTITION COEFFICIENT: n-octanol/water= NO DATA
DECOMPOSITION TEMPERATURE: NOT AVAILABLE	
EXPLOSIVE/FLAMMABLE LIMITS: (LEL): 2.5 (UEL): 12.8	

10. STABILITY AND REACTIVITY:

GENERAL: THIS PRODUCT IS STABLE AND HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: AVOID STRONG OXIDIZING AGENTS.
AVOID ALL SOURCES OF IGNITION. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A
CONSIDERABLE DISTANCE TO AN IGNITION SOURCE AND FLASHBACK.

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

11. TOXICOLOGICAL INFORMATION:

NOT IDENTIFIED AS A CARCINOGEN BY NTP, IARC OR OSHA

HEALTH EFFECTS:

LIKELY ROUTES OF EXPOSURE: skin adsorption, inhalation

DELAYED AND IMMEDIATE CHRONIC EFFETS FROM SHORT AND LONG-TERM EXPOSURE:

Skin: dry skin, dermatitis, de-fatting of the skin with chapping and cracking.

Inhalation: Inebriation, followed by headache and nausea. Dizziness, convulsions and unconsciousness in severe cases.
Anorexia and nervousness may persist for several months following acute overexposure.

NUMERICAL MEASURES (ACUTE TOXICITY ESTIMATE):

12. ECOLOGICAL INFORMATION:

AQUATIC AND/OR TERRESTRIAL EXOTOXICITY: UNKNOWN

PERSISTENCE AND DEGRADABILITY: UNKNOWN

BIOACCUMULATIVE POTENTIAL: UNKNOWN

13. DISPOSAL CONSIDERATIONS:

THIS MATERIAL IS CONSIDERED A HAZARDOUS WASTE FOR DISPOSAL PURPOSES. SEE 40 CFR PART 261.7 FOR FURTHER INFORMATION CONCERNING THE DISPOSITION OF EMPTY CONTAINERS. HAZARDOUS WASTES MAY NOT BE LANDFILLED! REFER TO 40 CFR PART 261 SUBPART C FOR DEFINITIONS OF HAZARDOUS WASTE.

14. TRANSPORTATION INFORMATION:



U.S. Department of Transportation (DOT)

Shipping Description: UN1133, Adhesives, 3, PGII
Non-Bulk Package marking: Adhesives, UN1133
Non-bulk package labeling: Flammable liquid
Packaging references: 49 CFR 172.101 adhesives containing a flammable liquid
Exceptions: 49 CFR 173.150
Hazardous Substance: See section for RQ's if applicable
Emergency Response Guide: 128

International Maritime Dangerous Goods (IMDG)

Shipping Description: UN1133, Adhesives, 3, PGII
Non-bulk Package marking: Adhesives, UN1133
Labels: Flammable liquid
Packaging-Non-Bulk: P001 UN MODEL RULES 49 CFR 172.101 adhesives containing a flammable liquid
Exceptions: PP1 UN MODEL RULES
EMS:
Marine pollutant:

International Civil Aviation Org./ International Air Transport Assoc. (ICAO/IATA)

UN/ID #: UN1133
Proper Shipping Name: Adhesives
Hazard Class/Division: 3
Subsidiary risk:
Packing Group: II
Non-Bulk Package marking: Adhesives, UN1133
Labels: Flammable liquid
Exceptions:
ERG Code: 128

15. REGULATORY INFORMATION:

OSHA STATUS: HAZARDOUS

CERCLA REPORTABLE QUANTITY: NONE

SARA TITLE III:

SECTION 302: EXTREMELY HAZARDOUS SUBSTANCES: NONE

SECTION 311/312: 311-YES 312-YES

SECTION 313: Contains 61.480 % toluene/hexane which is a reportable Section 313 chemical

RCRA STATUS: IF DISCARDED IN ITS PURCHASED FORM, THIS PRODUCT IS A RCRA HAZARDOUS WASTE. IT IS THE RESPONSIBILITY OF THE PRODUCT USER TO DETERMINE AT THE TIME OF DISPOSAL, WHETHER A MATERIAL CONTAINING THE PRODUCT OR RESIDUE OF THE PRODUCT REMAINS CLASSIFIED A HAZARDOUS WASTE AS PER 40 CFR 261, SUBPART C. STATE OR LOCAL REGULATIONS MAY ALSO APPLY IF THEY DIFFER FROM THE FEDERAL REGULATION.

TSCA Status: All materials contained in this product are TSCA listed.

Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substances List

European Union Status: All materials contained in this product are listed on EINECS

16. OTHER INFORMATION:

APPROVAL DATE: 01-05-2015

SUPERSEDES DATE:

REASON FOR REVISION: NEW SDS FORMAT

MSDS FORMAT: ACETONE TEMPLATE

THE INFORMATION HEREIN IS PRESENTED IN GOOD FAITH AND BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. INFORMATION IS BASED UPON SUPPLIER-ISSUED SAFETY DATA SHEETS AND MAY BE SUBJECT TO ERROR. IF APPRISED OF CHANGES, UPDATED SDS WILL BE PROMPTLY ISSUED. USERS MUST MAKE THEIR DETERMINATION REGARDING THE SUITABILITY OF THE PRODUCT FOR THEIR OWN PURPOSES PRIOR TO USE.

READ PRODUCT LABEL CAREFULLY BEFORE USE AND FOLLOW ALL PRECAUTIONS.

END OF SDS