Concrete Crack Polyurethane Resin Injection Repair Guide

The information for waterproofing cracks in poured concrete has been compiled from several professional sources as recommended guidelines. Due to the variability in poured wall conditions, the selection of the proper material for the intended application and installation is the sole responsibility of the applicator.

REPAIR KIT CONTENTS
This kit includes all of the materials and accessories for low-pressure injection and repair of approximately 30 linear feet of cracks.

- 3 dual cartridges Surface Seal and Port Adhesive
- 3 dual cartridges Urethane Foam Injection
- 1 syringe 455-0.5 Fast port adhesive/blow hole repair
- 1 Jake 300/300/150 manual dispensing tool
- 4 ¼ x 24 element mixers & 4 retaining nuts (for use with Injection Resin)
- 6 crossover restrictors
- 50 surface ports & caps
- 10 corner ports & caps
- 4 hose assemblies
- 5 pair nitrile gloves
- 1 plastic trowel & 1 wire brush
- Safety glasses
- 1 tool box
- 1 squeeze bottle
- Complete instructions & instructional CD
- Product Data Sheets & MSDS/ How to use the Jake Tool

CRACK PREPARATION
Place drop cloth on the floor in front of work area. Clean the surface surrounding the crack using the wire brush. Remove loose or flaking concrete, efflorescence, paint or coating to approximately 1-2 inches on either side of the crack. Wipe the surface clean of dust after brushing. The surface must be dry for proper installation of injection ports and surface seal. For best results if the surface is wet, wait until dry or if necessary, use a hot air gun, hair dryer, or oil free compressed air to dry.

SURFACE PORT PLACEMENT
Starting at a point closest to the floor (vertical cracks), mark port locations on the wall. (Ports are placed apart the thickness of the concrete wall, usually about 8”. Center ports over the crack (no drilling necessary).

SURFACE PORT ATTACHMENT AND CRACK SEALING
1. Prepare Surface Seal & Port Adhesive by dispensing (using the “Jake” tool) a sufficient amount of the surface seal on to a paper plate or scrap piece of cardboard, mix with the supplied trowel (repeat this step each time you run out of mixed adhesive).
2. Remove the cap from the surface port, then apply a small amount of mixed adhesive to the bottom of the port base. Place the first port starting at the bottom of the crack and repeat every 8 inches until the entire crack is ported. NOTE! Do not allow epoxy to block the bottom of the port opening or the crack beneath the port.
3. The next step is to work the mixed surface seal epoxy paste along the entire length of the crack using the plastic trowel. The recommended epoxy paste application is 1/8” thick and 2” wide.
4. Let the surface seal and port adhesive cure before beginning injection, about 20 minutes until fingernail hard. (Not recommended to wait overnight.)
5. Begin injecting slowly with low pressure (allowing the resin time to flow into and fill all small fissures) until the resin begins to flow from the port above it. Use the white plastic pinch valve on the hose assembly to turn off resin flow, plugging the first port with the cap provided, and move up to the next port. Repeat this procedure until the entire crack has been injected with the Urethane Resin.

INJECTION PROCEDURE
1. Using the squeeze bottle, flush the crack with 1-2 cups of water poured into the top port. Water should come out of every port below the top port indicating that the crack is contiguous and that ports are not blocked by epoxy. Water is also useful to flush the crack and aid in resin activation.
2. Place the Injection Resin dual cartridge in to the manual dispensing tool. Remove the plastic cap and then twist and pull to remove the plastic seal. Replace seal with restrictor, place the 1/4 X 24 mixing nozzle on top of restrictor over the end of the cartridge attaching with the plastic nut.
3. Attach the flexible hose assembly (wide end) over the mixer tip by pushing firmly.
4. For vertical cracks, attach the small end of the hose assembly into the lowest port by pressing firmly. For horizontal cracks begin at either end if one is not lower than the other.
5. Begin injecting slowly with low pressure (allowing the resin time to flow into and fill all small fissures) until the resin begins to flow from the port above it. Use the white plastic pinch valve on the hose assembly to turn off resin flow, plugging the first port with the cap provided, and move up to the next port. Repeat this procedure until the entire crack has been injected with the Urethane Resin.

Make sure to mound sufficient extra epoxy around the base of the ports. Expect to use 20 ounces per 10-foot of crack. Do not work the epoxy “into” the crack, just paste over the surface.

NOTE!
The secret to effective crack injection is patient low-pressure introduction of the resin. Small or hairline cracks will require 3 - 4 minutes at each port for proper filling to take place.

Hint: To improve the ability to penetrate very small & hairline cracks, heat the injection urethane system by placing the injection cartridge in a pail of hot tap water for 15-20 minutes. This temperature exposure should thin the material so that it can flow into the crack with less resistance proceed as before.
HOW TO USE THE JAKE 300 TOOL

1. Attach mixer to the tube set.

2. Load the JAKE 300 TOOL as follows:

   A. Depress brake plate with thumb, and, while holding it, pull back on the back knob and plate attached to the pushrods.

   B. With the tool facing upward, slide dual cartridges in (largest tube first in) until the cartridge front and retaining nut are within the notch of the carriage. Match piston ratio (i.e. 300/300 - 300/150 – 150/150). Line up the tube set with the pistons and begin squeezing the trigger handle slowly, making sure the drive rod is riding inside the cartridge on the right side, and the pistons are inserted directly into each tube.

   D. Before pressure is applied, recheck the front of the tube set to make sure it is in the notched opening of the tool front, so when pressure is applied it will lock into place.

   E Hold the tool with installed tube set pointing. upward; squeeze the trigger handle until the pistons make contact with the plungers, checking that the front is. still locked in place. This will also remove any air trapped in the tube set. (Cannot stop material flow if air is trapped in cartridges)

   F. Begin squeezing, allowing excess energy generated to be absorbed and stored in the spring. **Do not allow spring to bottom out.** This extends the life of the tool, and controls force generated.

   G. The tool is now loaded and ready for operation.

   H.* To release the pushrods depress the thumb plate while squeezing the trigger handle. This relieves the pressure on the thumb plate and allows the pushrods to release.

   **OVER SQUEEZING OF TRIGGER HANDLE MAY CAUSE**

   1. Leaking of material from rear of cartridges.
   2. Cutting of the drive rod.

   **LET THE SPRING DO THE WORK!**

   **KEEP TOOL CLEAN - WIPE CLEAN EVERY TIME THE CARTRIDGES ARE CHANGED - FOR BEST RESULTS DON'T LEAVE EMPTY OR PARTIALLY USED CARTRIDGE IN TOOL.**

Thank you for choosing the Jake Tool; if you keep it clean, it will last a long time. To change ratios, just use appropriate plungers. The rod position (s) remains the same.
PRODUCT DESCRIPTION:
Quick Foam Fine is a hydrophobic polyurethane liquid with a 600 cps.

PURPOSE:
Quick Foam Fine is designed to stop water infiltration or exfiltration through cracks. Cartridges contain product and catalyst that once introduced to water, reacts forming a closed cell barrier that prevents water infiltration. Designed to be used on dry or damp cracks that are hairline and larger but not actively leaking.

ADVANTAGES:
- Permanently flexible
- Easy to apply
- Low shrinkage
- Safe
- Economical

SPECIFICATIONS:
- Mix Ratio – 1:1
- Mixed Color – Amber
- Consistency – Paste
- Initial Cure - 20 min.
- Full Cure – 24 hrs.
- Shelf Life – 1 yr (unopened)
- Density (Core) - ASTM D-1622 – Free Rise 2.02 lb/ft.
- Shrinkage - Low Temp - ASTM D-2126
  (1 day – <0%), (7 days - <0%)
- Water Absorption – ASTM D-2127 – <1%
- Shear Strength – ASTM C-273 – 34 psi
- Tensile Strength – ASTM D-1623 – 31psi
- Elongation – ASTM D-1623 – 45%
- TDI Content – 0%
- Solids – 100%

PACKAGING:
21 oz 2:1 Dual Cartridge (Product & Catalyst)

APPROXIMATE USAGE:
Rate varies depending on size of crack. (App. 10-21 oz per 8’ crack, in an 8-10” thick wall.) Product can foam 2-3 times its un-foamed volume.

CURE TIME:
High temperatures will accelerate the setting time and cool temperatures will slow the setting time.

WALL CRACK INJECTION APPLICATION:

Prep:
Lay down crack injection drop cloth. Wire brush surface area to remove debris and roughen the surface.

Place a Quick Set Surface Port or Quick Set Surface Seal & Peel paste cartridge in the injection gun. Remove caps and attach a ¼”: 24 Quick Mix Static Mixer onto cartridge using a retaining nut. Inject just enough of the paste into a stir dish that you can work with to attach ports. Mix well with a putty knife.

NOTE: If desired paste can be injected into the stir dish without the use of a static mixer.

Installing the Universal Wall Surface/Corner Mounts:
Using a putty knife, apply the paste to the base of each port, being sure not to cover the injection hole with the paste. Starting at the bottom of the crack, place ports every 8-10” apart until reaching the top of the crack.

Prep for Low-Pressure Drill-In Ports:
Put on a dust mask before drilling into concrete. For cracks 1/16” wide or less, cracks in corners and actively leaking cracks use a 5/8” concrete drill bit. Drill a 2 to 4” deep hole at a 15 to 30° angle that intersects the crack. You will feel a slight release of pressure when your drill bit intersects the crack. Repeat every 8 to 10” alternating from side to side until entire crack is drilled. Use a can of compressed air or shop vac to remove concrete dust from drilled holes making sure the crack is not blocked with dust.

Installing Low-Pressure Drill-In Port Insertion:
Insert the black-sleeved end into drilled hole. Note: No other parts are needed as the check valve inside the port prevents material from flowing out during and after injection.

Applying Surface Port Paste:
After injection ports/mounts have been installed, inject a small amount of the A & B paste into a stir dish and mix with a putty knife to a consistent grey color. Paste the entire length of the crack making sure to feather the paste out a minimum of 2” wide. (By sealing the cracks entire length, you will help prevent the injection material from flowing back out of the crack.) Build the paste up ⅛” around each port. (By building up around the ports, there is less likely hood of a “blowout” around the ports due to the pressure of injection.)

Allow paste to cure (App. 10-30 min.) Do not begin injection until surface of paste resists a putty knife impression. Remove paste cartridge from the injection gun and recap unused portion for future use. NOTE: To accelerate curing time a heat gun can be used.

Injection:
Place the Quick Foam Fine cartridge in the injection gun. Remove the caps and attach a ¼”: 24 Quick Mix Static Mixer with a retaining nut. (Note: If needed, a Flexible Quick Hose Injection Assembly can be used instead of a mixing nozzle to inject the crack in the hard to reach areas.)

Begin injection at the lowest port/mount, with slow consistency until product begins to flow from the port above. Remove mixing nozzle and begin injecting the next port and so on up the crack. Note: It is important to keep injection gun parallel to the port during the process. If fluid stops flowing through the static mixer and pressure increases on the trigger, this could be a sign of dust clogging up the flow of product in the crack. At this time, relieve pressure off gun, cap off port and move to next port.

Should you experience a “blow out” during injection, inject that area with the Quick Set Urethane Adhesive or mix a little more paste to hold the injection material inside the crack.

AFTER INJECTION IS COMPLETED

Universal Surface/Corner Mounts
The ball valve inside the port will prevent any backflow of material.
Allow product to set up for a minimum of 24 hours. If the homeowner requests removal of the ports and paste, use a chisel and a hammer to get up behind the paste or a grinder/sander can be used.

If the Quick Set Surface Seal & Peel is used removal is best done within 24 hours of the application. Using a chisel and hammer work product off the wall and pull off the remainder. If left on longer, more force may be required.

NOTE: For additional resources, see Mar-flex Crack Injection Instructional Video for Wall Injection.

CLEAN UP: It is best to remove material from equipment before set up. Small, uncured spills can be wiped up with a rag. If material flows onto the floor or if a blow out occurs, allow product to cure and remove with a break-a-way knife or similar.

PRODUCT HANDLING/STORAGE:
• Do not expose stored product to cold or freezing temperatures.
• Avoid exposure to many common substances, including water and moisture.
• Safety glasses and clean rubber gloves should be worn at all times during crack injection process.

WARNING/DANGER:
• Do not smoke or use naked light, open flames, space heaters or other ignition sources near product.
• Use with adequate ventilation.
• KEEP OUT OF THE REACH OF CHILDREN.
• KEEP AWAY FROM PETS.
• Do not take internally.
• In case of ingestion, CALL A PHYSICIAN immediately. DO NOT INDUCE VOMITING
• This product should be pumped, not sprayed.

Component A – Prolonged or repeated exposure may cause eye/skin irritation. If eye contact occurs, flush with water for 15 minutes. Seek medical attention. If skin irritation, wash with soap and water. Seek medical help as needed. If ingested can cause irritation and corrosive action in mouth, stomach tissue or digestive tract. If swallowed drink 1 to 2 glasses of water or milk. DO NOT INDUCE VOMITING. Seek medical attention. Overexposure can lead to upper respiratory problems. Remove overexposed person to fresh air. Wear protective clothing, gloves and goggles.

Component B - Avoid skin and eye contact. Avoid ingestion and inhalation of heated product. Eye contact may cause severe burns. Seek medical attention immediately. Contact with skin may cause irritation. If skin contact occurs, wash immediately with clean water and seek medical help as needed. This product may be a strong sensitizer. Avoid inhalation of vapors. Wear protective clothing, gloves and goggles.

PRODUCT ONLY WARRANTY:
We warrant the product to be of good quality and manufactured to meet published physical properties and quality control standards.

Except as specifically provided herein, Mar-flex makes no warranty, express, implied or oral including but not limited to any warranty or merchantability, fitness for a particular purpose, usage of trade, course of dealing or course of performance in connection with this agreement. In no event shall Mar-flex be liable on any such warranty with respect to the product. Mar-flex shall not be liable for incidental or consequential damages including, but not limited to damages of the structure, its replacement, contents or personal injury. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.
2. Primary Routes Of Entry

- **Eye:** May cause irritation, inflammation and/or damage to sensitive eye tissue. Treatment includes instillation of sterile, saline solution to wash the eye and, if cornea is burned, instill antibiotic steroid to prevent infection. If cornea is damaged, consult a physician immediately.

- **Skin:** Keep away from skin contact. If exposed, wash with soap and water. For extended exposure or severe burns, consult a physician.

- **Ingestion:** May result in irritation and corrosive action in mouth, stomach tissue and digestive tract. Treat by washing out stomach with water. Call a physician immediately.

- **Inhalation:** May cause irritation to the eyes, upper respiratory tract and lungs. Effects may be delayed.

3. Hazards Identification

- **Potential Health Effects:**
  - At room temperature, MDI vapors are minimal due to low vapor pressure. However, heating, atomization (sprayed) or pumping may result in increased exposure. MDI becomes more hazardous when heated, atomized (sprayed) or pumping.

- **Inhalation Hazards:**
  - Respiratory sensitization with asthma-like symptoms may occur in a susceptible individual. MDI concentration below the exposure guidelines may cause irritation of the eyes, upper respiratory tract and lungs.

- **Eye Hazards:**
  - As a liquid or dust, may cause irritation, inflammation and/or damage to sensitive eye tissue.

- **Skin Hazards:**
  - May cause irritation, inflammation and/or damage to sensitive skin tissue.

- **Ingestion Hazards:**
  - May result in irritation and corrosive action in mouth, stomach tissue and digestive tract. Treat by washing out stomach with water. Call a physician immediately.

- **Inhalation Hazards:**
  - Respiratory sensitization with asthma-like symptoms may occur in a susceptible individual. MDI concentration below the exposure guidelines may cause irritation of the eyes, upper respiratory tract and lungs.

4. First Aid Measures

- **Eye:** Flush eyes with plenty of water for at least 15 minutes. Materials containing MDI may react with the moisture of the eye forming a thick material that may be difficult to wash from the eyes. Seek medical attention.

- **Skin:** Wash off in flowing water or shower. Remove and wash contaminated clothing and discard contaminated material. Rinse skin with soap and water. Consult a physician if skin irritation or rash occurs.

- **Ingestion:** Drink 1 or 2 glasses of water or milk. Do not induce vomiting unless directed to do so by medical personnel. Call a physician or transport to a medical facility immediately.

5. Fire and explosion precautions

- No special fire fighting procedures are required.

6. Accidental release measures

- **Environmental Measures:**
  - Prevent release, if possible. If release cannot be prevented, attempt to contain to prevent spread.

7. Handling and storage

- **Handling:** Use with adequate ventilation. Store in a cool, dry, well-ventilated area.

- **Storage:** Store separately from incompatible materials.

8. Exposure controls/Personal protective equipment

- **Respiratory Protection:** Use respiratory protection if exposure to MDI is expected. Consult a physician.

- **Eye Protection:** Wear eye protection if exposed to MDI. Consult a physician.

- **Skin Protection:** Wear protective clothing if exposed to MDI. Consult a physician.

9. Physical and chemical properties

- **Vapor Pressure:** Low

10. Stability and Reactivity

- **Stability:** Stable at normal temperatures.

- **Reactivity:** Reacts with moisture to form salts and isocyanic acids.
Incompatible Materials
- Reacts with water, acids, bases, alcohols & metal compounds.

Conditions To Avoid (Stability)
Hazardous Polymerization: May occur with incompatible reactants.
Stability: Stable under normal conditions.

Handling and Storage Precautions
- DO NOT ALLOW TO FREEZE.

Evaporation Rate: Slower than ethyl ether
Vapor Density: 1,5 (MDI) AIR=1
Vapor Pressure: <10^-5 (NW HG)

Boiling Point: 406 5 mm Hg °F
Flash Point Method: PMCC
Flash Point: 398 °F

Heating:
Packing Density: 10.31 lb/gal

Lower Explosive Limit: N.D.
Upper Explosive Limit: N.D.

5. Fire Fighting Measures
Extinguishing Media:
- Dry chemical, carbon dioxide foam, water spray for large fires.

6. Accidental Release Measures
Spill:
- Transfer to metal waste containers.

Clean Up:
- Saturate with water or an inert absorbent such as clay or vermiculite and transfer to metal waste containers.

Fire And Explosion Hazards
- Toxic Fumes are released in fire situations. Harmful if inhaled.

7. Handling And Storage - Continued

Ingredient(s): 4.4 Diphenylmethane Diisocyanate

Odor:
- Mild odor

Appearance:
- Clear liquid

Respiratory Protection
- A supplied air, full face piece, positive pressure or continuous flow respirator or supplied air

Skin Protection
- Protective gloves are the minimum protection. Additional precautions must be used when splash hazards are present.
- Materials may include butyl rubber, nitrile rubber, neoprene and Saranex coated Tyvek.
- The area should then be flushed with a decontamination solution.

Note:
- When stored between 60 degrees F and 85 degrees F (15 and 30 degree C) in sealed containers, typical shelf life is six months or more from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality.

8. Exposure Controls/Personal Protective Equipment

Engineering Controls
- Monitoring is required to determine engineering controls.

Respiratory Protection
- Physical And Chemical Properties
- A supplied air, full face piece, positive pressure or continuous flow respirator or supplied air

Eye/Face Protection
- Chemical splash goggles, safety glasses or a full face shield must be used consistent with conditions of use.

9. Physical And Chemical Properties
- Evaporation Rate: Slower than ethyl ether
- Vapor Pressure: <10^-5 (NW HG)
- Boiling Point: 406 5 mm Hg °F
- Flash Point Method: PMCC
- Flash Point: 398 °F
- Lower Explosive Limit: N.D.
- Upper Explosive Limit: N.D.

4.4 Diphenylmethane Diisocyanate

ACGIH TLV - 0.005ppm ; OSHA PEL - 0.02

4. Health Hazard Data
- Toxicity:
  - RTECS: XM 91000
  - C2H5O: U.S. EPA: T1

5. Toxicological Information
- Toxic Effects:
  - Increased respiratory difficulties, asthma, allergic reactions, mucous membranes irritation
  - Toxic fumes are released in fire situations. Harmful if inhaled.

- Toxic Fumes:
  - Release of fumes when heated

- Isocyanate Will React with Water
- May be used directly in place of formaldehyde.

- Incompatible with:
  - Strong acids, bases, water, alcohol, metal compounds

- Causes allergic reactions: Contact with the skin, eyes, and mouth must be avoided.
## Stability And Reactivity - Continued

**Conditions To Avoid (Polymerization)**
- Incompatible reactants especially strong bases, water or temperatures over 320 degrees F (160 degrees C). Possible evolution of carbon dioxide gas from overheating or exposure to contaminants may rupture closed containers.

The reaction with water is very slow under 102 degrees F, but is accelerated at higher temperatures and in the presence of alkalis, tertiary amines and metal compounds. Some reactions can be vigorous and even violent.

## Toxicological Information

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Carginogenicity</th>
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<tr>
<td>4.4 Diphenylmethane Diisocyanate</td>
<td>OSHA Regulated Carcinogen</td>
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## Ecological Information

No Data Available...

## Disposal Considerations

Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

**Container Disposal:**
Drums/containers must be thoroughly drained to process or storage vessels before removal to an appropriate area for subsequent decontamination. Drums/containers must be decontaminated in properly ventilated areas by personnel protected from the inhalation of isocyanate vapors. Spray or pour 1 to 5 gallons of decontamination solution into the drum making sure the walls are well rinsed. Let the drum container soak unsealed for 48 hours. Pour out the decontamination solution and triple rinse the empty container. Puncture or otherwise destroy the rinsed container before disposal. Do not heat or cut empty containers with electric or gas torch.

## Transport Information

**Proper Shipping Name:** Caulking Compound
**DOT Shipping Label:** Caulking Compound, NOI, In Box (I-149610)
**Freight Class:** 55

**Additional Shipping Paper Description:**
- IMO (Ocean): Not regulated
- ICAO (Air): Not regulated

## Regulatory Information

### U.S. Regulatory Information

**TSCA Status:** On the TSCA inventory

**CERCLA Reportable Quantity:** 4.4 Diphenylmethane Diisocyanate = 5,000 lbs

**SARA Hazard Classes:** Acute Health Hazard; Chronic Health Hazard; Reactivity Hazard

### SARA Title III - Section 313 Form “R”/TRI Reportable Chemical

**Ingredient(s):**
- 4.4 Diphenylmethane Diisocyanate

**U.S. Regulatory Information**

**NFPA:**
- HEALTH: 3
- FLAMMABILITY: 1
- REACTIVITY: 1

**HMIS:**
- HEALTH: 3
- FLAMMABILITY: 1
- REACTIVITY: 1

## Other Information

**Revision/Preparer Information:**
This MSDS Supercedes A Previous MSDS Dated: 01/01/2002

This MSDS complies with 29 CFR 1910.1200 (Hazard Communication Standard). The MSDS should be read and understood before using this product.

**Disclaimer:**
The above information pertains to this product as currently formulated and is based on the information available at this time. Other batches or varieties of this product, or of the product that is produced to produce this product, may have different hazards depending on their formulation. The MSDS should be used in conjunction with standard safety practices and practices of good industry and regulatory practice. The manufacturer, vendor or distributor of this material makes no representation or warranty that the information is complete, accurate, current or complete. The manufacturer does not assume any responsibility for loss or damage sustained by any person or company due to the use of this material or information contained within the MSDS. The manufacturer, vendor or distributor of this material makes no representation or warranty that the material described herein is suitable for any purpose other than the intended purpose.

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Mar-flex Building Solutions
Printed Using MSDS Generator™ 2000
When stored between 60 degrees F and 85 degrees F (15 to 30 degrees C) in sealed containers, typical shelf life is six months or more from the date of manufacture. Consult technical data sheet for handling and storage precautions.

Inhalation Hazards
- This blend will cause irritation on contact. Symptoms include watering or discomfort of the eyes with or without tearing, redness, swelling and itching of the eyes, and/or vision problems.

Ingestion Hazards
- Used in conjunction with “Side A” to seal cracks that are hairline to 1/8”.

Skin Hazards
- Immediately wash affected areas with plenty of water and seek medical attention.
- Tertiary amines can also cause severe conjunctivitis.

Eye Hazards
- This blend will cause irritation on contact. Symptoms include watering or discomfort of the eyes with or without tearing, redness, swelling and itching of the eyes, and/or vision problems.

Primary Routes(s) Of Entry
- Eye, Skin, Ingestion & Inhalation.

Accidental Release Measures
- If skin is contaminated with this material, wash skin with soap and water.
- If eyes are contaminated, flush with water for 15 minutes or more and seek medical attention.
- If inhaled, get fresh air and call a doctor.
- In case of contact with the eyes, flush with water for 15 minutes or more and seek medical attention.

Clean Up:
- Absorb spill with an appropriate absorbent material such as clay or vermiculite and transfer to steel waste containers.
- If possible, contain fire run-off water.
- Notify local health officials and other appropriate agencies if such contamination should occur.

Eye, Skin, Ingestion & Inhalation:
- With adequate ventilation and appropriate personal protective equipment, cover the area with an inert spreading agent such as sand to prevent further spreading and contamination of surface waters and drinking supplies.

Extinguishing Media
- Use dry chemical foam, carbon dioxide, halogenated agents or water.
- Use cold water spray to cool containers exposed to fire to minimize risk of rupture.
- A solid stream of water directed into the hot burning liquid could cause frothing.

Fire Fighting Instructions
- Keep away from heat, sparks and flames.
- Do not use water in extinguishing.
- A solid stream of water directed into the hot burning liquid may cause frothing.

Fire Degradation Products
- Harmful if inhaled. Toxic fumes are released in fire situations. Combustion produces carbon monoxide and carbon dioxide.

Health Hazards
- Tertiary amines are severely irritating to the upper respiratory tract and mucous membranes of the nose and throat and can result in blurring of vision against a general bluish haze and the appearance of halos around bright objects (referred to as “blue haze”). Tertiary amines can also cause severe conjunctivitis.

1.  Product  And  Company  Identification
   - Name: Quick Foam Fine Urethane (Side B)
   - Supplier: Mar-flex Waterproofing & Building Products

2.  Composition/Information  On  Ingredients
   - Trade Secret: Not Established
   - Material Name: Polyol Blend

3.  Hazard  Communication
   - Pictograms

4.  First Aid Measures
   - Ingestion: Induce vomiting by giving two glasses of water and sticking finger down throat. Never give anything by mouth if unconscious.
   - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility immediately.
   - Skin: Immediately wash affected areas with plenty of water and seek medical attention.
   - Eye: Immediately flush eyes with plenty of water for 15 minutes. Call a physician or transport to a medical facility immediately.

5.  Fire  Fighting  Measures
   - Extinguishing Media: Use dry chemical foam, carbon dioxide, halogenated agents or water.

6.  Accidental Release Measures
   - Absorb spill with an appropriate absorbent material such as clay or vermiculite and transfer to steel waste containers.
   - Notify local health officials and other appropriate agencies if such contamination should occur.

7.  Handling  And  Storage
   - When stored between 60 degrees F and 85 degrees F (15 to 30 degrees C) in sealed containers, typical shelf life is six months or more from the date of manufacture. Consult technical data sheet for handling and storage precautions.

8.  Exposure Controls/Personal Protection
   - Biological Exposure Indices: No applicable
   - TLV: No applicable
   - Asbestos: No applicable
   - Personal Protective Equipment: Wear positive pressure self contained breathing apparatus with a full face piece and full protective clothing.

9.  Physical And Chemical Properties
   - Melting Point: NDA
   - Boiling Point: NDA
   - Ph: NDA
   - Density: NDA
   - Flash Point: NDA
   - Flammable Limits: NDA
   - Explosive Limits: NDA
   - Autoignition Temperature: NDA
   - Vapors: NDA
   - Vapor Pressure: NDA
   - Stabilities: NDA
   - Reactions: NDA
   - Hazards Allied To Handling And Storage: NDA
   - Hazardous Decomposition Products: NDA
   - Unstable: NDA
   - Resin Type: Polyol Blend
   - Viscosity: NDA
   - Odor: NDA
   - pH: NDA
   - Specific Gravity: NDA
   - Odor Threshold: NDA
   - Odor Notes: NDA

10.  Stabilizers, Preservatives, Antioxidants

11.  Toxicological Information
   - Acute Oral: NDA
   - Acute Inhaled: NDA
   - Acute Skin: NDA
   - Acute Eye: NDA
   - Skin Sensitization: NDA
   - Respiratory Sensitization: NDA
   - Carcinogenicity: NDA
   - Reproductive: NDA
   - Developmental: NDA
   - Neurotoxicity: NDA
   - Teratogenicity: NDA
   - Mutagenicity: NDA
   - Carcinogen: NDA
   - Ecotoxicity: NDA
   - Persistence And Bioaccumulation: NDA
   - Persistence: NDA
   - Bioaccumulation: NDA

12.  Ecological Information

13.  Transport Information

14.  Regulatory Information
   - TSCA: Yes
   - OSHA: Yes
   - DOT: Yes
   - IATA: Yes
   - IMDG: Yes
   - ADR: Yes
   - RID: Yes
   - IEC: Yes
   - RID: Yes
   - IMS: Yes

15.  Other Information

16.  Certification

17.  Other Information

18.  Product And Company Identification
   - Material Safety Data Sheet
   - Product Code: IA-68100
   - Product Name: Quick Foam Fine Urethane (Side B)
   - Supplier: Mar-flex Waterproofing & Building Products
   - Issue Date: 12/21/2011

19.  Supplier Information
   - Company: Mar-flex Waterproofing & Building Products
   - Address: 500 Business Parkway
   - City: Carlisle
   - State: OH
   - Zip: 45005
   - Phone: 513-422-7285
   - Fax: 513-422-7282
   - E-mail: info@mar-flex.com
   - Website: www.mar-flex.com

20.  Manufacturer Information
   - Company: Mar-flex Waterproofing & Building Products
   - Address: 500 Business Parkway
   - City: Carlisle
   - State: OH
   - Zip: 45005
   - Phone: 513-422-7285
   - Fax: 513-422-7282
   - E-mail: info@mar-flex.com
   - Website: www.mar-flex.com

21.  Emergency And First Aid Measures

22.  Storage

23.  Other Information

24.  Table Of Contents

25.  Product And Company Identification

26.  Material Safety Data Sheet

27.  Table Of Contents

28.  Product And Company Identification

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30.  Table Of Contents

31.  Product And Company Identification

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33.  Table Of Contents

34.  Product And Company Identification

35.  Material Safety Data Sheet

36.  Table Of Contents

37.  Product And Company Identification

38.  Material Safety Data Sheet

39.  Table Of Contents

40.  Product And Company Identification

41.  Material Safety Data Sheet

42.  Table Of Contents

43.  Product And Company Identification

44.  Material Safety Data Sheet

45.  Table Of Contents

46.  Product And Company Identification

47.  Material Safety Data Sheet

48.  Table Of Contents

49.  Product And Company Identification

50.  Material Safety Data Sheet
7. Handling And Storage - Continued

- Shelf life requirements affecting performance quality. Should freezing occur, the material must be thawed thoroughly and mixed until uniform. Opened containers must be handled properly to prevent moisture contamination.

Storage Precautions:
- **DO NOT ALLOW TO FREEZE.**

8. Exposure Controls/Personal Protection

**Engineering Controls**
- **Ventilation**
  - General/local ventilation typically controls exposure levels very adequately. More aggressive engineering controls or personal protective equipment may be required in some applications such as heating. Monitoring is required to determine engineering controls.

**Eye/Face Protection**
- Chemical splash goggles, safety glasses or a full face shield must be used consistent with splash hazard present. If vapor exposure causes eye discomfort, use a full-face piece respirator or air supplied hood. Contact lenses should not be worn by persons who work with this product.

**Skin Protection**
- Wear clothing and gloves impervious to MDI under conditions of use. Materials may include butyl rubber, nitrile rubber, neoprene and Saranex coated Tyvek.

**Respiratory Protection**
- The specific respirator selected must be based on contamination levels of this blend found in the workplace and must not exceed the working limits of the respirator and be jointly approved by NIOSH/MSHA. Air purifying respirators equipped with full face organic vapor cartridges can be used only if isocyanate vapors are not present from the “A” component. In areas of high concentration, fresh air supplied respirators or self contained breathing apparatus should be used. A positive pressure self contained breathing apparatus can be used in emergencies or other unusual situations.

**Other/General Protection**
- An eye wash station and safety shower or other drenching facilities are recommended in the work area.

9. Physical And Chemical Properties

- **Appearance**
  - Clear yellow liquid.

- **Chemical Type:** Mixture

- **Physical State:** Liquid

- **Boiling Point:** NA °F

- **Specific Gravity:** 1.08

- **Percent Volatiles:** <3%

- **Vapor Pressure:** ND

- **Vapor Density:** Heavier than air

- **Solubility:** In Water - Partial

- **Evaporation Rate:** Slower than Ethyl Ether

10. Stability And Reactivity

- **Stability:** This is a stable material.

- **Hazardous Polymerization:** Will occur.

- **Conditions To Avoid (Stability)**
  - Avoid high temperatures, sparks, flame and extended exposure over 110 degrees F.

- **Incomplete with oxidizing materials, isocyanates and acids.**

11. Toxicological Information

- **Chronic/Carcinogenicity**
  - The components of this blend are not listed by the NTP, IARC or regulated by OSHA as carcinogens.

12. Ecological Information

- **No Data Available...**

13. Disposal Considerations

- Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

**Container Disposal**
- Empty containers retain product residue (liquid and/or vapor) can be dangerous. Do not pressurize, or expose such containers to heat, flame, sparks, static electricity or other sources of ignition. All containers should be disposed in an environmentally safe manner and in accordance with government regulations.

**RCRA Information**
- Refer to RCRA 40-CFR 261 and/or any other appropriate federal, state or local requirements for proper classification information.

14. Transport Information

- **Proper Shipping Name**
  - Caulking Compound

- **Hazard Class**
  - Combustible Class III B

- **DOT Shipping Label**
  - Caulking Compound.NOI.In Boxes (I-149610)

- **Freight Class**
  - 55

**Additional Shipping Paper Description**
- IMO (Ocean): Not regulated
- ICAO (Air): Not regulated

15. Regulatory Information

- **No Data Available...**
Quick Foam Fine Urethane (Side B)

MATERIAL SAFETY DATA SHEET

Revision/Preparer Information
This MSDS Supercedes A Previous MSDS Dated: 01/01/2002
This MSDS complies with 29 CFR 1910.1200 (Hazard Communication Standard). This MSDS should be read and understood before using this product.

Disclaimer
The above information pertains to this product as currently formulated and is based on the information available at this time. Addition of reducers or other additives to these products may substantially alter the composition and hazards of the product. Each individual should make a determination as to the suitability of this information for the intended purpose(s). Mar-flex Building Solutions makes no warranties, express or implied and assumes no responsibility regarding the suitability of this information for the user's intended purpose or for the receptivity of employees to its training on the information presented.

HEALTH
2
FLAMMABILITY
1
REACTIVITY
1
PERSONAL PROTECTION
1

NFPA
HMF

Printed Using MSDS Generator™ 2000
PRODUCT DESCRIPTION:
Quick Set Surface Port Paste is a two component smooth epoxy adhesive.

PURPOSE:
The Quick Set Surface Port Paste is designed to be used as a surface sealer and to attach ports in epoxy and urethane foam crack repair.

ADVANTAGES:
• Rapid curing
• Easy to apply
• Safe
• Economical

SPECIFICATIONS:
• Mix Ratio – 1:1
• Mixed Color – Gray
• Consistency – Paste
• Pot Life – 6-10 min.
• Full Cure – @40°F - 1.5 – 1.75 hr., @73°F – 25-30 min., @90°F – 20-25 min.
• Shelf Life – 2 Yr. (unopened)
• Compressive Strength – ASTM C-882 – 2 day dry cure - 3,000 psi
• Bond Strength – ASTM C-882 – 2 day dry cure - 3,000 psi
• Tensile Strength - ASTM D-638 – 1 day – 3,300 psi
• Flexural Properties – ASTM D-790 – 1 day – 5,000 psi
• Shear Properties – ASTM D-7362 – 1 day - 2,500
• Deflection Temperature – ASTM D-648 -1 day - 115°F
• Water Absorption – ASTM D-570 – 7 days – 2 hr boil - 0.8%

PACKAGING:
22 oz. 1:1 Dual Cartridge (Product & Catalyst)

APPROXIMATE USAGE:
Rate varies depending on size of crack and the thickness in which it is applied.

CURE TIME:
25-30 minutes @ 73°F or 1.5-1.75 hours @ 40°F.

Working Time:
At room temperature (55°-85°F) there is a working life of 6-8 minutes. At these temperatures, it is best to mix parts A&B for 1-2 minutes and immediately begin to apply to ports to set them.

In summer months, where the components may be at (75°-95°F), the product will be setting up in the mixing bowl within 4-7 minutes. Under these circumstances surface should be ready to inject 20-30 minutes after mixed.

In cooler months, (35°-55°F) working life will be 8-12 minutes. At these temperatures it is best to mix parts A&B thoroughly for 1-2 minutes and then allow an induction period for the product to begin to create its own heat. This may take 2-6 minutes after mixing has begun. Using this recommended procedure would permit the surface to be ready at the earliest time and may be as rapid as experienced in warmer circumstances.

Both procedures are geared to a working life of 5-8 minutes for the surface sealing and setting of injection ports. Do not mix more than will be used with this limited time. (The last material applied will harden the fastest.)

WALL CRACK APPLICATION:
Prep:
Lay down crack injection drop cloth. Wire brush surface area to remove debris and roughen the surface.

Place a Quick Set Surface Port Paste cartridge into the injection gun. Remove caps and attach a ¼": 24 Quick Mix Static Mixer onto cartridge using a retaining nut. Inject just enough of the paste into a stir dish that you can work with to attach ports or if desired distribute A&B directly into cup by applying pressure to the end caps. Mix well with a putty knife.

Installing the Universal Wall Surface/Corner Mounts:
1. Using a putty knife, apply the paste to the base of each port, being sure not to cover the injection hole with the paste.

Place ports every 8-10" apart until reaching the top of the crack.

Applying Surface Port Paste Over Cracks:
After injection ports/mounts have been installed, inject a small amount of the A & B paste into a stir dish and mix with a putty knife to a consistent grey color. Paste the entire length of the crack making sure to feather the paste out a minimum of 2" wide. (By sealing the cracks entire length, you will help prevent the injection material from flowing back out of the crack.) Build the paste up ¼” around each port. (By building up around the ports, there is less likely hood of a “blowout” around the ports due to the pressure of injection.)

Allow paste to cure (App. 10-30 min.) Do not begin injection until surface of paste resists a putty knife impression. Remove paste cartridge from the injection gun and recap unused portion for future use. NOTE: To accelerate curing time a heat gun can be used.

AFTER INJECTION HAS BEEN COMPLETED
Removal of paste/ports
Allow injection product to set up for a minimum of 24 hours. If the homeowner requests removal of the ports and paste, use a chisel and a hammer to get up behind the paste or a grinder/sander can be used.

If the Quick Set Surface Seal & Peel is used removal is best done within 24 hours of the application. Using a chisel and hammer work product off the wall and pull off the remainder. If left on longer, more force may be required.

NOTE: For additional resources, see Mar-flex Crack Injection Instructional Video for Wall Injection.

CLEAN UP:
It is best to remove material from equipment before set up. Soak in epoxy stripper to remove cured product. Small, uncured spills can be...
wiped up with a rag. Using rags with acetone or heavy-duty detergents can remove cured product.

PRODUCT HANDLING/STORAGE:
- Do not expose stored product to cold or freezing temperatures.
- Avoid exposure to many common substances, including water and moisture.
- Do not thin.
- Store away from light and between 45°F - 95°F.
- Condition product to 65°F - 85°F.
- Safety glasses and clean rubber gloves should be worn at all times during crack injection process.

WARNING/DANGER:
- Use with adequate ventilation.
- Keep out of the reach of children.
- Do not take internally.
- In case of ingestion, CALL A PHYSICIAN immediately. DO NOT INDUCE VOMITING
- Avoid contact with skin and eyes

Component A – Prolonged or repeated exposure may cause eye/skin irritation. If eye contact occurs, flush with water for 15 minutes. Seek medical attention. If skin irritation, wash with soap and water. Seek medical help as needed. If ingested can cause irritation and corrosive action in mouth, stomach tissue or digestive tract. If swallowed give large quantities of water and INDUCE VOMITING. Seek medical attention. Overexposure can lead to upper respiratory problems. Remove overexposed person to fresh air. Wear protective clothing, gloves and goggles.

Component B - Avoid skin and eye contact. Avoid ingestion and inhalation of heated product. Eye contact may irritation. Seek medical attention immediately. Contact with skin may cause irritation. If skin contact occurs, wash immediately with clean water and seek medical help as needed. Avoid inhalation of vapors. Wear protective clothing, gloves and goggles.

PRODUCT ONLY WARRANTY:
We warrant the product to be of good quality and manufactured to meet published physical properties and quality control standards.

Except as specifically provided herein, Mar-flex makes no warranty, express, implied or oral including but not limited to any warranty or merchantability, fitness for a particular purpose, usage of trade, course of dealing or course of performance in connection with this agreement. In no event shall Mar-flex be liable on any such warranty with respect to the product. Mar-flex shall not be liable for incidental or consequential damages including, but not limited to damages of the structure, its replacement, contents or personal injury. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.
Material Safety Data Sheet

Quick Set Surface Port Paste (Side A)

1. Product And Company Identification

Supplier

Manufacturer

Mar-flex Waterproofing & Building Products

500 Business Parkway

Carlisle, OH 45005 USA

Telephone Number: 513-422-7285

FAX Number: 513-422-7282

E-Mail: info@mar-flex.com

Web Site: www.mar-flex.com

Emergency Contacts

Chem-Trec: 1-800-424-9300

Issue Date: 12/21/2011

Product Name: Quick Set Surface Port Paste (Side A)

Chemical Name: Modified Epoxy Resin

CAS Number: Not Established

MSDS Number: 18

Product Code: IA-68160

Synonyms: Thermosetting Resin

Product/Material Uses

- Used in conjunction with "Side B" to seal the surface of a crack and to attach ports to masonry surfaces.

2. Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percent Of Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A/DIGLYCIDYL ETHER RESIN</td>
<td>25068-38-6</td>
<td>50</td>
</tr>
<tr>
<td>FUMED SILICA</td>
<td>067762-90-7</td>
<td>0</td>
</tr>
<tr>
<td>INERT POWDERS</td>
<td>14807-96-6</td>
<td>0</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Primary Routes(s) Of Entry

- Inhalation & skin contact

Eye Hazards

- Mild irritation

Skin Hazards

- Moderate irritation

Conditions Aggravated By Exposure

- Allergy, eczema & skin conditions.

Conditions Aggravated By Overexposure

- Irritation, sensitization and dermatitis.

Sensitization

- Sensitizer

4. First Aid Measures

Eye

- Flush with water for at least 15 minutes. If any ill effects develop, seek medical attention.

Skin

- Wash with soap and water. Wash contaminated clothing before reuse.

Ingestion

- Give large quantities of water and induce vomiting. Get medical attention.

Inhalation

- Remove to fresh air and give oxygen if breathing is difficult. Seek medical attention.

5. Fire Fighting Measures

Flash Point: 200 °F

Flash Point Method: TCC

Lower Explosive Limit: N.E.

Upper Explosive Limit: N.E.

Fire And Explosion Hazards

- Decomposition and combustion products may be toxic.

Extinguishing Media

- Carbon dioxide, dry chemicals, foam or water spray.

Fire Fighting Instructions

- Use self-contained breathing apparatus.

Flammable Limits:

Acrid smoke/fumes

6. Accidental Release Measures

Small Spills:

Wipe with rag. Avoid all personal contact.

Larger Spills:

Use absorbent material. Collect waste in designated container. Flush contaminated area with water.

Handling & Storage

Handling And Storage Precautions

- Causes irritation. May cause allergic skin reaction.

Handling Precautions

- Avoid contact with eyes, skin or clothing. Avoid breathing vapors, use with good ventilation.

Storage Precautions

- Store in cool, dry area in closed cartridges. DO NOT ALLOW TO FREEZE

Work/Hygienic Practices

- Wash hands thoroughly with soap and water after every use.

Avoid breathing vapors. Use with good ventilation. Wash hands thoroughly with soap and water after every use.

Protective Clothing

- None required.
8. Exposure Controls/Personal Protection

- **Engineering Controls**
  - Use good mechanical, ventilation and local exhaust.

- **Eye/Face Protection**
  - Safety glasses.

- **Skin Protection**
  - Rubber or polyethylene gloves. Use of barrier cream recommended.

- **Respiratory Protection**
  - Avoid breathing vapors, use adequate ventilation.

- **Other/General Protection**
  - Use disposable containers and paper on work area. Use appropriate equipment to prevent eye or skin contact.

9. Physical And Chemical Properties

- **Chemical Type**: Mixture
- **Physical State**: Liquid
- **Boiling Point**: >200 °C
- **Specific Gravity**: 1.32 (water = 1)
- **Percent Volatiles**: NIL
- **Vapor Pressure**: >1 TORR @ 180 degree C
- **Vapor Density**: >1 (air = 1)
- **Solubility**: Insoluble
- **Evaporation Rate**: <1 (butyl acetate = 1)

10. Stability And Reactivity

- **Stability**: Stable
- **Conditions To Avoid (Stability)**
  - Elevated temperatures.
- **Incompatible Materials**
  - Strong oxidizers, strong acids or bases in bulk.
- **Hazardous Decomposition Products**
  - Carbon monoxide, carbon dioxide, aldehydes and other organics.

11. Toxicological Information

- **Eye Effects**
  - (Rabbits) Mild irritation.

- **Skin Effects**
  - (Rabbits) Moderate irritation.

- **Acute Oral Effects**
  - Oral LDO: (Rabbit) >4000 mg/kg

- **Chronic/Carcinogenicity**
  - None of the components of this material are listed as carcinogens by NTP, IARC or OSHA.
  - LD50s provided are the lowest values for the type of bisphenol A diglycidal ether resins used.

12. Ecological Information

- **No Data Available**...

13. Disposal Considerations

- Dispose in accordance with Federal, State and Local regulations.

14. Transport Information

- **Proper Shipping Name**: Caulking Compound
- **DOT Shipping Label**: Caulking Compound.
  - NOI. In Boxes (I-149610)
- **Freight Class**: 55

15. Regulatory Information

- **State Regulations**
  - In order to comply with California Proposition 65, we feel obligated to advise that some of our products may conceivably contain trace contaminants of some of the listed chemicals. While not necessarily added to our products as ingredients, some of the listed chemicals may be present in the raw materials as received from suppliers and over which we have no control. Therefore, even though some of the listed substances may not represent a significant risk as defined by the regulations, in order to comply with California law, we feel obligated to make the following statement:
  - **Warning**: Our products may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive toxicants.

16. Other Information

- This MSDS Supercedes A Previous MSDS Dated: 07/20/2001
- This MSDS complies with 29 CFR 1910.1200 (Hazard Communication Standard). This MSDS should be read and understood before using this product.
- **Disclaimer**
  - The above information pertains to this product as currently formulated and is based on the information available at this time. Addition of reducers or other additives to these products may substantially alter the composition and hazards of the product.
  - Mar-flex Building Solutions makes no warranties, express or implied and assumes no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).
Quick Set Surface Port Paste (Side B)

1. Product And Company Identification

Supplier
Manufacturer
Mar-flex Waterproofing & Building Products
500 Business Parkway
Carlisle, OH 45005 USA
Telephone Number: 513-422-7285
FAX Number: 513-422-7282
E-Mail: info@mar-flex.com
Web Site: www.mar-flex.com

Supplier Emergency Contacts
Manufacturer Emergency Contacts
Chem-Trec: 1-800-424-9300
Issue Date: 12/21/2011

Product Name: Quick Set Surface Port Paste (Side B)
Chemical Name: Modified Polymercaptain
CAS Number: Not Established
MSDS Number: 160
Product Code: IA-68160
Synonyms: Epoxy Hardner

2. Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percent Of Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUMED SILICA</td>
<td>067762-90-7</td>
<td>5%</td>
</tr>
<tr>
<td>INERT POWDERS</td>
<td>14807-96-6</td>
<td>80%</td>
</tr>
<tr>
<td>PROPRIETARY POLYMERCAPTAINS</td>
<td>TRADE SEC 20</td>
<td>40%</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Primary Routes(s) Of Entry
- Inhalation & skin contact.

Eye Hazards
- Conjunctival irritant

Skin Hazards
- Moderate irritation

Chronic/Carcinogenicity Effects
- None of the components of this material are listed as carcinogens by NTP, IARC or OSHA.

Conditions Aggravated By Exposure
- Allergy, eczema & skin conditions.

Conditions Aggravated By Overexposure
- ACUTE:
  - Will cause burns to skin and eyes. High concentrations of vapor can cause irritation of respiratory tract, nausea and vomiting.

4. First Aid Measures

Eye
- Flush with water for at least 15 minutes. Seek medical attention.

Skin
- Immediately deluge skin with plenty of water. Remove contaminated clothing and shoes.

Ingestion
- If victim is conscious, give large quantities of water and induce vomiting. Seek medical attention.

Inhalation
- Remove to fresh air if breathing is difficult. Seek medical attention.

5. Fire Fighting Measures

Flash Point: 185 °F
Flash Point Method: PMCC
Lower Explosive Limit: NE
Upper Explosive Limit: NE

Extinguishing Media
- Use CO2 (Carbon Dioxide), dry chemicals, or foam.

Fire Fighting Instructions
- Avoid breathing smoke. Use self-contained breathing apparatus.

6. Accidental Release Measures

Small Spills:
- Wipe with rag. Avoid all personal contact.

Larger Spills:
- Use absorbent material. Collect waste in designated container. Flush contaminated area with water.

7. Handling And Storage

Handling Precautions
- Causes irritation. May cause allergic skin reaction.
- Keep containers tightly closed when not in use. Avoid breathing vapors of heated material.

Storage Precautions
- Store away from heat and open flame. Store in cool, dry area in closed cartridges.
- DO NOT ALLOW TO FREEZE

Work/Hygienic Practices
- Wash hands thoroughly with soap and water after handling.
- Protective Clothing
- Eye/Face Protection: Safety glasses.

8. Exposure Controls/Personal Protection

Engineering Controls
- Ventilation
  - Normal ventilation should be adequate. Local if vapors are vented.

Eye/Face Protection
- Safety glasses.

9. Transportation Information

DOT Number: 5150
UN Number: 5150

10. Regulatory Information

Material Safety Data Sheet (Side B)
Quick Set Surface Port Paste (Side B)

8. Exposure Controls/Personal Protection - Continued

**Skin Protection**
- Rubber or impervious gloves recommended.

**Respiratory Protection**
- Avoid breathing vapors, use adequate ventilation.

9. Physical And Chemical Properties

**Appearance**
- Black paste.

**Odor**
- Skunk like, Pinc-0.1

**Chemical Type:** Mixture

**Physical State:** Liquid

**Boiling Point:** ND (>200) °F

**Specific Gravity:** >1.91 +/- .02 (water = 1)

**Percent Volatiles:** <1

**Vapor Pressure:** ND

**Vapor Density:** ND

**Solubility:** Appreciable in water

**Evaporation Rate:** <1 (butyl acetate = 1)

10. Stability And Reactivity

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Conditions To Avoid (Stability):**
- Mixing with oxidizers or epoxy resins in quantities over 1 lb.

**Incompatible Materials**
- Strong oxidizing agents, acids

**Hazardous Decomposition Products**
- Carbon monoxide, carbon dioxide, and nitrogen oxides.

11. Toxicological Information

**Eye Effects**
- (Rabbits) - Conjunctival irritant.

**Skin Effects**
- (Rabbits) - Moderate irritation.

**Acute Oral Effects**
- Oral LDO:
  - (Rat) LD50 - < 5 cc/kg

**Acute Inhalation Effects**
- Can cause irritation of respiratory tract, nausea and vomiting.

**Chronic/Carcinogenicity**
- None of the components of this material are listed as carcinogens by NTP, IARC or OSHA.

**Conditions Aggravated By Exposure**
- Allergy, Eczema or any kind of skin condition.

LD50s provided are the lowest values for the type of bisphenol A diglycidal ether resins used.

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with Federal, State and Local regulations.

14. Transport Information

**Proper Shipping Name**
- Caulking Compound

**DOT Shipping Label**
- Caulking Compound.NOI.In Boxes (I-149610)

**Freight Class**
- 55

15. Regulatory Information

State Regulations
- In order to comply with California Proposition 65, we feel obligated to advise that some of our products may conceivably contain trace contaminants of some of the listed chemicals. While not necessarily added to our products as ingredients, some listed chemicals may be present in the raw materials as received from suppliers and over which we have no control. Therefore, even though some of the listed substances may not represent a significant risk as defined by the regulations, in order to comply with California law, we feel obligated to make the following statement:

**Warning:** Our products may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive toxicants.

16. Other Information

**Revision/Preparer Information**
- This MSDS Supercedes A Previous MSDS Dated: 01/06/2011
- This MSDS complies with 29 CFR 1910.1200 (Hazard Communication Standard). This MSDS should be read and understood before using this product.

**Disclaimer**
- The above information pertains to this product as currently formulated and is based on the information available at this time. Addition of reducers or other additives to these products may substantially alter the composition and hazards of the product.

Mar-flex Waterproofing & Building Products makes no warranties, express or implied and assumes no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Mar-flex Building Solutions

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