



## 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 drier, 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.

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.

4. Let the surface seal and port adhesive cure before beginning injection, about 20 minutes until fingernail hard. (Not recommended to wait overnight.)



### INJECTION PROCEDURE

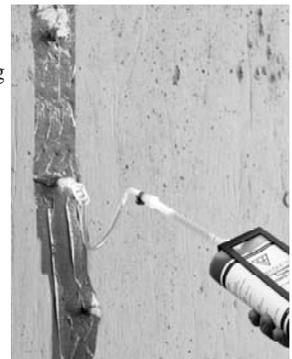
1. Using the squeeze bottle, flush the crack with 1-2 cups of water poured into the top port. Water should come out of every port below the top port indicating that the crack is contiguous and that ports are not blocked by epoxy. Water is also useful to flush the crack and aid in resin activation.



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.



\* The ports can be removed by striking with a hammer after foaming is complete in about 3 or 4 hours. Grind off the surface seal epoxy for a smooth finish. The surface seal epoxy is paintable if desired.

**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.

**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.

# 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.



# Urethane Quick Foam Fine

## Concrete Crack Repair

1:1 Cartridge

### 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 ex-filtration 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 ever 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 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.

### 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

#### UniversalSurface/Corner Mounts

The ball valve inside the port will prevent any backflow of material.



# Urethane Quick Foam Fine

## Concrete Crack Repair

1:1 Cartridge

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.

HEALTH AND SAFETY INFORMATION IS GIVEN IN THE MATERIAL SAFETY DATA SHEET AND THE PRODUCT DATA SHEET AVAILABLE FOR THIS PRODUCT. THESE SHOULD BE READ AND UNDERSTOOD BEFORE USING THIS PRODUCT.

Mar-flex Waterproofing and Building Products  
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Rev. 09/11



# MATERIAL SAFETY DATA SHEET

## Quick Foam Fine Urethane (Side A)

### 1. Product And Company Identification

<b>Supplier</b>	<b>Manufacturer</b>
Mar-flex Waterproofing & Building Products )\$ \$ 61 glb/199 DUF, K UH Carlisle, OH 45005 USA	Mar-flex Waterproofing & Building Products )\$ \$ 61 glb/199 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	Telephone Number: 513-422-7285 FAX Number: 513-422-7282 E-Mail: info@mar-flex.com Web Site: www.mar-flex.com
<b>Supplier, Emergency Contacts &amp; Phone Number</b> Chem-Trac: 1-800-424-9300	<b>Manufacturer, Emergency Contacts &amp; Phone Number</b> Chem-Trac: 1-800-424-9300

Issue Date: 12/21/2011  
Product Name: Quick Foam Fine Urethane (Side A)  
Chemical Name: Polyurethane Foam  
CAS Number: Not Established  
Chemical Family: Polymeric Diphenylmethane Diisocyanate  
MSDS Number: 0  
Product Code: IA-68100  
**Synonyms**  
Aromatic Isocyanate

**Product/Material Uses** - Used in conjunction with "Side B" to seal cracks that are hairline to 1/8" wide.  
**Product Identification Text** - Side "A" of a 2 Part Cartridge

### 2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
4.4. Diphenylmethane Diisocyanate	101-68-8	
Percent of Total Weight is a Trade Secret		

#### EMERGENCY OVERVIEW

This material is designed and intended to be pumped, not sprayed. MDI becomes more hazardous when atomized (sprayed). The following data is derived from tests performed when the material is sprayed and should be considered but may not apply to pumping operations as recommended by the manufacturer.

**Potential Health Effects:** At room temperature, MDI vapors are minimal due to low vapor pressure. However, heating, foaming, or otherwise dispersing (drumming, venting or pumping) operations may generate more vapor or aerosol concentrations of isocyanate.

KEEP AWAY FROM CHILDREN AND ANIMALS.

### 3. Hazards Identification

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

**Eye Hazards** - As a liquid or dust, may cause irritation, inflammation and/or damage to sensitive eye tissue. Symptoms include watering or discomfort of eyes. Corneal injury is unlikely.

# MATERIAL SAFETY DATA SHEET

## Quick Foam Fine Urethane (Side A)

### 3. Hazards Identification - Continued

**Skin Hazards** - No irritation is likely to develop following short contact periods with skin. Prolonged or repeated exposure can cause skin irritation, reddening, dermatitis and in some individuals, sensitization. Skin contact may result in allergic skin reactions or respiratory sensitization but is not expected to result in absorption or amounts sufficient to cause other adverse effects. May stain skin.

**Ingestion Hazards** - Single dose oral toxicity is considered to be extremely low. Can result in irritation and corrosive action in mouth, stomach tissue and digestive tract.

**Inhalation Hazards** - Persons with known respiratory and allergy problems must not be exposed to this product.

**Chronic/Carcinogenicity Effects - Chronic:** As a result of previous repeated overexposure or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) or tissue injury in the upper respiratory tract.

Animal test indicate skin contact alone may also lead to allergic respiratory reaction. These effects may be permanent. Any person developing asthmatic reaction or other sensitization should be removed from further exposure.

**Carcinogenicity:** MDI and Polymeric MDI are not listed by the NTP, IARC or regulated by OSHA as carcinogens. Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6mg/m<sup>3</sup>) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects.

**Signs And Symptoms** - Symptoms may include coughing, dryness of throat, headache, nausea, difficulty breathing and a feeling of tightness in the chest. Effects may be delayed.

**Conditions Aggravated By Exposure** - Respiratory sensitization with asthma-like symptoms may occur in a susceptible individual. MDI concentration below the exposure guideline may cause irritation of the eyes, upper respiratory tract and lungs.

**Conditions Aggravated By Overexposure** - Excessive exposure may cause irritation of the eyes, upper respiratory tract and lungs. Impaired lung function (decreased ventilators capacity) has been associated with over exposure to isocyanate.

### First Aid (Pictograms)



#### 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 shoes. Seek medical attention if redness, itching or a burning sensation develops or persists after the area is washed.

**Ingestion** - If swallowed, drink 1 or 2 glasses of water or milk. Do not induce vomiting unless directed to do so by medical personnel. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person).

**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.

**Note To Physician - Eyes:** Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision.

**Skin:** This material is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn.

**Ingestion:** Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated of the irritating nature of this product.

# MATERIAL SAFETY DATA SHEET

## Quick Foam Fine Urethane (Side A)

### Fire Fighting (Pictograms)



### 5. Fire Fighting Measures

Flash Point: 398 °F  
Flash Point Method: PMCC  
Lower Explosive Limit: N.D.  
Upper Explosive Limit: N.D.

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

**Extinguishing Media** - Dry chemical, carbon dioxide foam, water spray for large fires.

### 6. Accidental Release Measures

**Spill:** Evacuate spill area. Use adequate ventilation and appropriate personal protect equipment, cover the area with an inert absorbent such as clay or vermiculite and transfer to metal waste containers. Saturate with water or decontamination solution below, but do not seal the container with the isocyanate mixture. Larger quantities of liquid may be transferred directly to drums for disposal.

**Note:** Isocyanate will react with water and generate carbon dioxide. This could result in the rupture of any closed container.

**Clean Up:** The area should then be flushed with a decontamination solution. The decontamination solution is a 5-10% mixture of sodium carbonate and .5% liquid detergent in water solution or a 3% concentrated ammonium hydroxide and .5% liquid detergent in water. Use 10 parts decontamination solution to 1 part spilled material. If the ammonium hydroxide solution is used, ammonia will be evolved as a vapor. Use caution to avoid exposure to high concentrations of ammonia. Allow to stand for 48 hours letting evolved carbon dioxide to escape.

### Handling & Storage (Pictograms)



### 7. Handling And Storage

**Handling And Storage Precautions** - **Storage:** 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. Should freezing occur, the material must be thawed thoroughly and mixed until uniform. Open containers must be handled properly to prevent moisture contamination.

**Handling:** Use personal protective equipment when transferring material to or from drums, totes or other containers. Safety glasses and gloves are the minimum protection. Additional precautions must be used when splash hazards are present. The reaction of polyols and isocyanates generate heat. Contact of the reacting materials with skin or eyes can cause severe burns and may be difficult to remove from the affected areas. Immediately wash affected areas with plenty of water and seek medical attention. In addition, such contact increases the risk of exposure to isocyanate vapors. Do not smoke or use naked lights, open flames, space heaters or other ignition source near pouring or frothing operations.  
**Storage Precautions** - **DO NOT ALLOW TO FREEZE.**

# MATERIAL SAFETY DATA SHEET

## Quick Foam Fine Urethane (Side A)

### 7. Handling And Storage - Continued



### 8. Exposure Controls/Personal Protection

**Engineering Controls** - **Exposure:** MDI contains reactive isocyanate groups. Use with adequate ventilation to keep airborne isocyanate level below TLV or 0.005 ppm TWA (ACGIH) and PEL 0.02 ppm ceiling (OSHA). These control limits do not apply to previously sensitized individuals, or to individuals with existing respiratory disease, such as bronchitis, emphysema or asthma. Respiratory protection may be needed where material is heated, sprayed or used in confined space, or if TLV is exceeded. Never try to detect MDI vapor by odor. Persons with known respiratory or allergic problems must not be exposed to this product.

**Ventilation:** MDI has a very low vapor pressure at room temperature. 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.

**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** - A supplied air, full face piece, positive pressure or continuous flow respirator or supplied air hood is required when airborne concentrations are unknown or exceed threshold values. A positive pressure self contained breathing apparatus can be used in emergencies or other unusual situations. All equipment must be NIOSH/MSHA approved and maintained. Air purifying (cartridge type) respirator are not approved for protection against isocyanates.

### Ingredient(s) - Exposure Limits

4,4 Diphenylmethane Diisocyanate  
ACGIH TLW - 0.005ppm ; OSHA PEL - 0.02

### 9. Physical And Chemical Properties

**Appearance** - Dark brown liquid  
**Odor** - Mild odor

**Chemical Type:** Mixture  
**Physical State:** Liquid  
**Boiling Point:** 406.5 mm Hg °F  
**Packing Density:** 10.31 lb/gal  
**Vapor Pressure:** <10.5 (NW HG)  
**Vapor Density:** 5.5 (MDI) AIR=1  
**Solubility:** Resin reacts slowly to liberate CO2 gas  
**Evaporation Rate:** Slower than ethyl ether

### 10. Stability And Reactivity

**Stability:** Stable under normal conditions.  
**Hazardous Polymerization:** May occur with incompatible reactants.

**Conditions To Avoid (Stability)** - Should be handled and stored in a way to avoid exposure to many common substances, including water and moisture. Avoid extended exposure 110 degree F (45 degree C).  
**Incompatible Materials** - Reacts with water, acids, bases, alcohols & metal compounds.

## MATERIAL SAFETY DATA SHEET

### Quick Foam Fine Urethane (Side A)

<p><b>10. Stability And Reactivity - Continued</b></p> <p><b>Conditions To Avoid (Polymerization)</b> - 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.</p> <p>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.</p>
<p><b>11. Toxicological Information</b></p> <p><b>Ingredient(s) - Carcinogenicity</b>          4,4 Dipheny/methane Diisocyanate          OSHA Regulated Carcinogen</p> <p><b>Ingredient(s) - Toxicological Data</b>          4,4 Dipheny/methane Diisocyanate          ca 100%</p>
<p><b>12. Ecological Information</b></p> <p>No Data Available...</p>
<p><b>13. Disposal Considerations</b></p> <p>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.</p> <p><b>Container Disposal:</b> 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.</p> <p><b>RCSA Information</b> - MDI is not a hazardous waste. However, under RCSA, it is the responsibility of the user of products to determine, at any time of disposal, whether a product meets any of the criteria for hazardous waste.</p> <p>Refer to RCSA 40 - CFR 261 and/or any other appropriate Federal, State or Local requirements for proper classification information.</p>
<p><b>14. Transport Information</b></p> <p><b>Proper Shipping Name</b> - Caulking Compound</p> <p><b>DOT Shipping Label</b>          Caulking Compound,NOI,In Boxes (1-149610)</p> <p><b>Freight Class</b>          55</p> <p><b>Additional Shipping Paper Description</b> - IMO (Ocean): Not regulated          ICAO (Air): Not regulated</p>
<p><b>15. Regulatory Information</b></p> <p><b>U.S. Regulatory Information</b> - TSCA Status: On the TSCA inventory          CERCLA Reportable Quantity: 4,4 Dipheny/methane Diisocyanate = 5,000 lbs</p>

## MATERIAL SAFETY DATA SHEET

### Quick Foam Fine Urethane (Side A)

<p><b>15. Regulatory Information - Continued</b></p> <p><b>SARA Hazard Classes</b>          Acute Health Hazard; Chronic Health Hazard; Reactivity Hazard          SARA Title III - Section 313 Form "R"/TRI Reportable Chemical          SARA Section 313 Notification -</p> <p><b>Ingredient(s) - U.S. Regulatory Information</b>          4,4 Dipheny/methane Diisocyanate          SARA Title III - Section 313 Form "R"/TRI Reportable Chemical</p>								
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><b>NFPA</b></p>  </div> <div style="text-align: center;"> <p><b>HMS</b></p> <table border="1" style="border-collapse: collapse;"> <tr> <td style="background-color: #00b0f0; color: white;">HEALTH</td> <td style="background-color: #ff0000; color: white;">3</td> </tr> <tr> <td style="background-color: #ff0000; color: white;">FLAMMABILITY</td> <td style="background-color: #ff0000; color: white;">1</td> </tr> <tr> <td style="background-color: #ffff00; color: black;">REACTIVITY</td> <td style="background-color: #ffff00; color: black;">1</td> </tr> <tr> <td style="background-color: #cccccc; color: black;">PERSONAL PROTECTION</td> <td style="background-color: #cccccc; color: black;">J</td> </tr> </table> </div> </div>	HEALTH	3	FLAMMABILITY	1	REACTIVITY	1	PERSONAL PROTECTION	J
HEALTH	3							
FLAMMABILITY	1							
REACTIVITY	1							
PERSONAL PROTECTION	J							
<p><b>16. Other Information</b></p> <p><b>Revision/Preparer Information</b>          This MSDS Supersedes A Previous MSDS Dated: 01/01/2002</p> <p>This MSDS complies with 29 CFR 1910.1200 (Hazard Communication Standard). This MSDS should be read and understood before using this product.</p> <p><b>Disclaimer</b>          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.</p> <p><b>Mar-flex Waterproofing &amp; Building Products</b> 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).</p> <p><b>Mar-flex Building Solutions</b></p> <p style="font-size: small;">Printed Using MSDS Generator™ - 2005</p>								



# MATERIAL SAFETY DATA SHEET

## Quick Foam Fine Urethane (Side B)

<b>1. Product And Company Identification</b>			
<b>Supplier</b>	<b>Manufacturer</b>		
Mar-flex Waterproofing & Building Products 500 Business Parkway Carlisle, OH 45005 USA	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	Telephone Number: 513-422-7285 FAX Number: 513-422-7282 E-Mail: info@mar-flex.com Web Site: www.mar-flex.com		
<b>Supplier Emergency Contacts &amp; Phone Number</b> Chem-Trac: 1-800-424-9300	<b>Manufacturer Emergency Contacts &amp; Phone Number</b> Chem-Trac: 1-800-424-9300		
Issue Date: 12/21/2011			
Product Name: Quick Foam Fine Urethane (Side B)			
CAS Number: Not Established			
Chemical Family: Polyol Blend			
MSDS Number: 69			
Product Code: IA-68100			
<b>Product/Material Uses</b> - Used in conjunction with "Side A" to seal cracks that are hairline to 1/8".			
<b>Product Identification Text</b> - Side "B" of a 2 Part Cartridge			
<b>2. Composition/Information On Ingredients</b>			
TRADE SECRET	Ingredient Name	CAS Number	Percent Of Total Weight
		Not Establis	
<b>EMERGENCY OVERVIEW</b>			
<b>Harmful if Inhaled. Toxic fumes are released in fire situations.</b>			
<b>3. Hazards Identification</b>			
<b>Primary Route(s) Of Entry</b> - Eye, Skin, Ingestion & Inhalation.			
<b>Eye Hazards</b> - This blend will cause irritation on contact. Symptoms include watering or discomfort of the eyes with marked excess redness and swelling of the conjunctiva and chemical burns of the cornea. Tertiary amines can produce a 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.			
<b>Skin Hazards</b> - Prolonged contact may lead to burning associated with severe reddening, swelling and tissue destruction.			
<b>Ingestion Hazards</b> - The tertiary amines from this blend could cause severe irritation and possible chemical burns of the mouth, throat, esophagus and stomach with pain or discomfort in the mouth, throat, chest and abdomen.			
<b>Inhalation Hazards</b> - Heating, foaming or otherwise mechanically dispersing (drumming, venting or pumping) operations of this blend may generate more vapor or aerosol concentrations of its components. This blend contains tertiary amine in amounts less than what is required to report as hazardous, however the tertiary amine component is severely irritating to the upper respiratory tract and mucous membranes of the nose and throat and can result in coughing, chest discomfort and headache.			
<b>Signs And Symptoms</b> - Symptoms include nausea, vomiting, diarrhea, thirst, circulatory collapse and coma.			

# MATERIAL SAFETY DATA SHEET

## Quick Foam Fine Urethane (Side B)

<b>First Aid (Pictograms)</b>	
<b>4. First Aid Measures</b>	<p><b>Eye</b> - Immediately wash affected areas with plenty of water and seek medical attention.</p> <p><b>Skin</b> - Immediately wash affected areas with plenty of water and seek medical attention.</p> <p><b>Ingestion</b> - Induce vomiting by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.</p> <p><b>Inhalation</b> - 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.</p>
<b>Fire Fighting (Pictograms)</b>	
<b>5. Fire Fighting Measures</b>	<p>Flash Point: NDA °F</p> <p>Autoignition Point: NDA °F</p> <p><b>Fire And Explosion Hazards - Fire Degradation Products:</b> Toxic fumes are released in fire situations. Combustion may produce carbon dioxide, carbon monoxide and nitrogen oxides.</p> <p><b>Extinguishing Media</b> - 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. If possible, contain fire run-off water.</p> <p><b>Fire Fighting Instructions - Protective Equipment:</b> Wear positive pressure self contained breathing apparatus with full face piece and full protective clothing.</p>
<b>6. Accidental Release Measures</b>	<p><b>Spills:</b> Evacuate spill area. Remove all sources of flames, heating elements, gas engines, etc. Emergency clean up personnel should wear chemical goggles, rubber or plastic gloves and clothing as required to protect against contact. If mist and/or hot vapors are present, use air purifying respirator or self contained breathing apparatus as required. The type of respirator selected should prevent exposure from traces of propylene oxide which may be present. Prevent spreading and contamination of surface waters and drinking supplies. Notify local health officials and other appropriate agencies if such contamination should occur.</p> <p><b>Clean Up:</b> With adequate ventilation and appropriate personal protective equipment, cover the area with an inert absorbent material such as clay or vermiculite and transfer to steel waste containers. The spill area should then be washed down with soap and water to dilute and remove traces of material. Ventilate area to remove the remaining vapors.</p>
<b>Handling &amp; Storage (Pictograms)</b>	
<b>7. Handling And Storage</b>	<p><b>Handling And Storage Precautions</b> - 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</p>

## MATERIAL SAFETY DATA SHEET

### Quick Foam Fine Urethane (Side B)

#### 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.

**Heating** Use personal protective equipment when transferring material to or from drums, totes, or other containers. Safety glasses and gloves are the minimum protection. Additional precautions must be used when splash hazards are present. The reaction of polyols and isocyanates generate heat. Contact of the reacting materials with skin and eyes can cause severe burns and is difficult to remove from the affected areas. In addition, such contact increases the risk of exposure to isocyanate vapors. Do not smoke or use naked lights, open flames, space heaters or other ignition sources near pouring or frothing operations.

#### Protective Clothing (Pictograms)



#### 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.

## MATERIAL SAFETY DATA SHEET

### Quick Foam Fine Urethane (Side B)

#### 10. Stability And Reactivity - Continued

**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; NO1.1n Boxes (1-149610)

**Freight Class**

55

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

ICAO (Air): Not regulated

#### 15. Regulatory Information

No Data Available...

# MATERIAL SAFETY DATA SHEET

## Quick Foam Fine Urethane (Side B)

NFPA		HMIS	
	HEALTH	2	
	FLAMMABILITY	1	
	REACTIVITY	1	
	PERSONAL PROTECTION	J	

### 16. 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). 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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# Epoxy Quick Set Surface Port Paste

## Wall/Port Paste

1:1 Cartridge

### 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 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 –  
@ 40°F, Cure time - 1 hr. – 30 psi, 4 hr. – 3,500 psi, 16 hrs. – 6,900 psi, 7 days – 8,300 psi  
@ 73°F, Cure time – 1 hr. – 5,600 psi, 4 hr. – 7,800 psi, 16 hrs. – 8,500 psi, 7 days – 9,200 psi
- Bond Strength – ASTM C-882 – 2 day dry cure - 3,000 psi
- Tensile Strength - ASTM D-638 – 1 day – 3,3000 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



# Epoxy Quick Set Surface Port Paste

Wall/Port Paste

1:1 Cartridge

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.

**HEALTH AND SAFETY INFORMATION IS GIVEN IN THE MATERIAL SAFETY DATA SHEET AND THE PRODUCT DATA SHEET AVAILABLE FOR THIS PRODUCT. THESE SHOULD BE READ AND UNDERSTOOD BEFORE USING THIS PRODUCT.**

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Rev. 9/11



# MATERIAL SAFETY DATA SHEET

## Quick Set Surface Port Paste (Side A)

# MATERIAL SAFETY DATA SHEET

## Quick Set Surface Port Paste (Side A)

<b>1. Product And Company Identification</b>		
<b>Supplier</b>	<b>Manufacturer</b>	
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	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	
<b>Supplier Emergency Contacts &amp; Phone Number</b> Chem-Trec: 1-800-424-9300	<b>Manufacturer Emergency Contacts &amp; Phone Number</b> 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		
<b>Synonyms</b> Thermosetting Resin		
<b>Product/Material Uses</b> - Used in conjunction with "Side B" to seal the surface of a crack and to attach ports to masonry surfaces.		
<b>Product Identification Text</b> - Side "A" of the 1:1 Cartridge		
<b>2. Composition/Information On Ingredients</b>		
Ingredient Name	CAS Number	Percent Of Total Weight
BISPHENOL A/DIGLYCIDYL ETHER RESIN	25008-98-6	50 - 90
FUMED SILICA	067762-90-7	0 - 5
INERT POWDERS	14807-96-6	0 - 50
<b>EMERGENCY OVERVIEW</b>		
<b>KEEP AWAY FROM CHILDREN AND ANIMALS.</b>		
<b>3. Hazards Identification</b>		
<b>Primary Routes(s) Of Entry</b> - Inhalation & skin contact		
<b>Eye Hazards</b> - Mild Irritation		
<b>Skin Hazards</b> - Moderate Irritation		
<b>Conditions Aggravated By Exposure</b> - Allergy, eczema & skin conditions.		
<b>Conditions Aggravated By Overexposure</b> - Irritation, sensitization and dermatitis.		
<b>Sensitization</b> - Sensitizer		

<b>First Aid (Pictograms)</b>	
<b>4. First Aid Measures</b>	<p><b>Eye</b> - Flush with water for at least 15 minutes. If any ill effects develop, seek medical attention.</p> <p><b>Skin</b> - Wash with soap and water. Wash contaminated clothing before reuse.</p> <p><b>Ingestion</b> - Give large quantities of water and induce vomiting. Get medical attention.</p> <p><b>Inhalation</b> - Remove to fresh air and give oxygen if breathing is difficult. Seek medical attention.</p>
<b>Fire Fighting (Pictograms)</b>	
<b>5. Fire Fighting Measures</b>	<p>Flash Point: 200 °F</p> <p>Flash Point Method: TCC</p> <p>Lower Explosive Limit: N.E.</p> <p>Upper Explosive Limit: N.E.</p>
<b>Fire And Explosion Hazards</b>	- Decomposition and combustion products may be toxic.
<b>Extinguishing Media</b>	- Carbon dioxide, dry chemicals, foam or water spray.
<b>Fire Fighting Instructions</b>	- Use self-contained breathing apparatus.
<b>Flammable Limits:</b>	Acrid smoke/fumes
<b>6. Accidental Release Measures</b>	<p><b>Small Spills:</b> Wipe with rag. Avoid all personal contact.</p> <p><b>Larger Spills:</b> Use absorbent material. Collect waste in designated container. Flush contaminated area with water.</p>
<b>Handling &amp; Storage (Pictograms)</b>	
<b>7. Handling And Storage</b>	<p><b>Handling And Storage Precautions</b> - Causes irritation. May cause allergic skin reaction.</p> <p><b>Handling Precautions</b> - Avoid contact with eyes, skin or clothing. Avoid breathing vapors, use with good ventilation.</p> <p><b>Storage Precautions</b> - Store in cool, dry area in closed cartridges. <b>DO NOT ALLOW TO FREEZE</b></p> <p><b>Work/Hygiene Practices</b> - Wash hands thoroughly with soap and water after every use.</p> <p>Avoid breathing vapors. Use with good ventilation. Wash hands thoroughly with soap and water after every use.</p>
<b>Protective Clothing (Pictograms)</b>	

# MATERIAL SAFETY DATA SHEET

## Quick Set Surface Port Paste (Side A)

<p><b>8. Exposure Controls/Personal Protection</b></p> <p><b>Engineering Controls - Ventilation</b> - Use good mechanical ventilation and local exhaust.</p> <p><b>Eye/Face Protection</b> - Safety glasses.</p> <p><b>Skin Protection</b> - Rubber or polyethylene gloves. Use of barrier cream recommended.</p> <p><b>Respiratory Protection</b> - Avoid breathing vapors. use adequate ventilation.</p> <p><b>Other/General Protection</b> - Use disposable containers and paper on work area.</p> <p>Use appropriate equipment to prevent eye or skin contact.</p>	<p><b>9. Physical And Chemical Properties</b></p> <p>Chemical Type: Mixture</p> <p>Physical State: Liquid</p> <p>Boiling Point: &gt;200 °C</p> <p>Specific Gravity: 1.32 (water=1)</p> <p>Percent Volatiles: NIL</p> <p>Vapor Pressure: &gt;1 TORR @ 180 degree C</p> <p>Vapor Density: &gt;1 (air = 1)</p> <p>Solubility: Insoluble</p> <p>Evaporation Rate: &lt;1 (butyl acetate = 1)</p>
<p><b>10. Stability And Reactivity</b></p> <p>Stability: Stable</p> <p><b>Conditions To Avoid (Stability)</b> - Elevated temperatures.</p> <p><b>Incompatible Materials</b> - Strong oxidizers, strong acids or bases in bulk.</p> <p><b>Hazardous Decomposition Products</b> - Carbon monoxide, carbon dioxide, aldehydes and other organics.</p>	<p><b>11. Toxicological Information</b></p> <p><b>Eye Effects</b> - (Rabbits) Mild Irritation.</p> <p><b>Skin Effects</b> - (Rabbits) Moderate Irritation.</p> <p><b>Acute Oral Effects - Oral LD<sub>50</sub>:</b> (Rabbit) &gt;4000 mg/kg</p> <p><b>Chronic/Carcinogenicity</b> - None of the components of this material are listed as carcinogens by NTP, IARC or OSHA. LD<sub>50</sub>S provided are the lowest values for the type of bisphenol A diglycidal ether resins used.</p> <p><b>12. Ecological Information</b></p> <p>No Data Available...</p>
<p><b>13. Disposal Considerations</b></p> <p>Dispose in accordance with Federal, State and Local regulations.</p>	<p><b>14. Transport Information</b></p> <p><b>Proper Shipping Name</b> - Caulking Compound</p> <p><b>DOT Shipping Label</b></p> <p>Caulking Compound NOI, In Boxes (1-149610)</p> <p><b>Freight Class</b></p> <p>55</p>

# MATERIAL SAFETY DATA SHEET

## Quick Set Surface Port Paste (Side A)

<p><b>15. Regulatory Information</b></p> <p><b>State Regulations</b> - 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:</p> <p>Warning: Our products may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive toxicants.</p>	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><b>NEPA</b></td> <td style="text-align: center;"><b>HMIS</b></td> </tr> <tr> <td style="text-align: center;">  </td> <td style="text-align: center;"> <table border="1" style="width: 100%;"> <tr> <td style="background-color: #00b0f0; color: white;">HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #ff0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: #ffff00; color: black;">REACTIVITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #cccccc; color: black;">PERSONAL PROTECTION</td> <td style="text-align: center;">J</td> </tr> </table> </td> </tr> </table>	<b>NEPA</b>	<b>HMIS</b>		<table border="1" style="width: 100%;"> <tr> <td style="background-color: #00b0f0; color: white;">HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #ff0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: #ffff00; color: black;">REACTIVITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #cccccc; color: black;">PERSONAL PROTECTION</td> <td style="text-align: center;">J</td> </tr> </table>	HEALTH	2	FLAMMABILITY	1	REACTIVITY	0	PERSONAL PROTECTION	J
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<p><b>16. Other Information</b></p> <p><b>Revision/Preparer Information</b></p> <p>This MSDS Supersedes A Previous MSDS Dated: 07/20/2001</p> <p>This MSDS complies with 29 CFR 1910.1200 (Hazard Communication Standard). This MSDS should be read and understood before using this product.</p> <p><b>Disclaimer</b></p> <p>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.</p> <p>Mar-flex Waterproofing &amp; 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 purpose(s).</p> <p><b>Mar-flex Building Solutions</b></p> <p style="font-size: small;">Printed Using MSDS Generator™ 2000</p>													



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## Quick Set Surface Port Paste (Side B)

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<b>1. Product And Company Identification</b>		
<b>Supplier</b>	<b>Manufacturer</b>	
Mar-flex Waterproofing & Building Products 500 Business Parkway Carlisle, OH 45005 USA	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	Telephone Number: 513-422-7285 FAX Number: 513-422-7282 E-Mail: info@mar-flex.com Web Site: www.mar-flex.com	
<b>Supplier Emergency Contacts &amp; Phone Number</b> Chem-Trec: 1-800-424-9300	<b>Manufacturer Emergency Contacts &amp; Phone Number</b> Chem-Trec: 1-800-424-9300	
Issue Date: 12/21/2011		
Product Name: Quick Set Surface Port Paste (Side B)		
Chemical Name: Modified Polymercaplain		
CAS Number: Not Established		
MSDS Number: 160		
Product Code: IA-68160		
<b>Synonyms</b> Epoxy Hardener		
<b>Product/Material Uses</b> - Used in conjunction with "Side A" to seal the surface of a crack and to attach ports to masonry surfaces.		
<b>Product Identification Text</b> - Side "B" of the 1:1 Cartridge		
<b>2. Composition/Information On Ingredients</b>		
Ingredient Name	CAS Number	Percent Of Total Weight
FUMED SILICA	067762-90-7	0 - 5
INERT POWDERS	14807-96-6	60 - 80
PROPRIETARY POLYMERCAPTAINS	TRADE SEC	20 - 40
<b>EMERGENCY OVERVIEW</b>		
<b>KEEP AWAY FROM CHILDREN AND ANIMALS.</b>		
<b>3. Hazards Identification</b>		
<b>Primary Routes(s) Of Entry</b> - Inhalation & skin contact.		
<b>Eye Hazards</b> - Conjunctival irritant		
<b>Skin Hazards</b> - Moderate irritation		
<b>Chronic/Carcinogenicity Effects</b> - None of the components of this material are listed as carcinogens by NTP, IARC or OSHA.		
<b>Conditions Aggravated By Exposure</b> - Allergy, eczema & skin conditions.		
<b>Conditions Aggravated By Overexposure</b> - <b>ACUTE:</b> Will cause burns to skin and eyes. High concentrations of vapor can cause irritation of respiratory tract, nausea and vomiting.		

<b>First Aid (Pictograms)</b> 
<b>4. First Aid Measures</b>
<b>Eye</b> - Flush with water for at least 15 minutes. Seek medical attention. <b>Skin</b> - Immediately deluge skin with plenty of water. Remove contaminated clothing and shoes. <b>Ingestion</b> - If victim is conscious, give large quantities of water and induce vomiting. Seek medical attention. <b>Inhalation</b> - Remove to fresh air if breathing is difficult. Seek medical attention.
<b>Fire Fighting (Pictograms)</b> 
<b>5. Fire Fighting Measures</b>
Flash Point: 185 °F Flash Point Method: PMCC Lower Explosive Limit: NE Upper Explosive Limit: NE
<b>Exhausting Media</b> - Use CO2 (Carbon Dioxide), dry chemicals, or foam. <b>Fire Fighting Instructions</b> - Avoid breathing smoke. Use self-contained breathing apparatus.
<b>6. Accidental Release Measures</b>
<b>Small Spills:</b> Wipe with rag. Avoid all personal contact. <b>Larger Spills:</b> Use absorbent material. Collect waste in designated container. Flush contaminated area with water.
<b>Handling &amp; Storage (Pictograms)</b> 
<b>7. Handling And Storage</b>
<b>Handling And Storage Precautions</b> - Causes irritation. May cause allergic skin reaction. <b>Handling Precautions</b> - Keep containers tightly closed when not in use. Avoid breathing vapors of heated material. <b>Storage Precautions</b> - Store away from heat and open flame. Store in cool, dry area in closed cartridges. <b>DO NOT ALLOW TO FREEZE</b> <b>Work/Hygiene Practices</b> - Wash hands thoroughly with soap and water after handling.
<b>Protective Clothing (Pictograms)</b> 
<b>8. Exposure Controls/Personal Protection</b>
<b>Engineering Controls</b> - <b>Ventilation</b> - Normal ventilation should be adequate. Local if vapors are vented. <b>Eye/Face Protection</b> - Safety glasses.

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## Quick Set Surface Port Paste (Side B)

<p><b>8. Exposure Controls/Personal Protection - Continued</b></p> <p><b>Skin Protection</b> - Rubber or impervious gloves recommended.</p> <p><b>Respiratory Protection</b> - Avoid breathing vapors, use adequate ventilation.</p>
<p><b>9. Physical And Chemical Properties</b></p> <p><b>Appearance</b> - Black paste.</p> <p><b>Odor</b> - Skunk like, Pinc-0-1</p> <p>Chemical Type: Mixture</p> <p>Physical State: Liquid</p> <p>Boiling Point: ND (&gt;200) °F</p> <p>Specific Gravity: &gt;1.91 +/- .02 (Water = 1)</p> <p>Percent Volatiles: &lt;1</p> <p>Vapor Pressure: ND</p> <p>Vapor Density: ND</p> <p>Solubility: Appreciable in water</p> <p>Evaporation Rate: &lt;1 (butyl acetate = 1)</p>
<p><b>10. Stability And Reactivity</b></p> <p>Stability: Stable</p> <p>Hazardous Polymerization: Will not occur</p> <p><b>Conditions To Avoid (Stability)</b> - Mixing with oxidizers or epoxy resins in quantities over 1 lb.</p> <p><b>Incompatible Materials</b> - Strong oxidizing agents, acids</p> <p><b>Hazardous Decomposition Products</b> - Carbon monoxide, carbon dioxide, and nitrogen oxides.</p>
<p><b>11. Toxicological Information</b></p> <p><b>Eye Effects</b> - (Rabbits) - Conjunctival irritant.</p> <p><b>Skin Effects</b> - (Rabbits) Moderate irritation.</p> <p><b>Acute Oral Effects</b> - Oral LD50: (Rat) LD50 - &lt; 5 cc/kg</p> <p><b>Acute Inhalation Effects</b> - Can cause irritation of respiratory tract, nausea and vomiting.</p> <p><b>Chronic/Carcinogenicity</b> - None of the components of this material are listed as carcinogens by NTP, IARC or OSHA.</p> <p><b>Conditions Aggravated By Exposure</b> - Allergy, Eczema or any kind of skin condition.</p> <p>LD SOs provided are the lowest values for the type of bisphenol A diglycidal ether resins used.</p>
<p><b>12. Ecological Information</b></p> <p>No Data Available...</p>
<p><b>13. Disposal Considerations</b></p> <p>Dispose in accordance with Federal, State and Local regulations.</p>
<p><b>14. Transport Information</b></p> <p><b>Proper Shipping Name</b> - Caulking Compound</p> <p><b>DOT Shipping Label</b></p> <p>Caulking Compound,NOI,In Boxes (-149610)</p> <p><b>Freight Class</b></p> <p>55</p>

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