



## Technical Data

# ElastoFil 75

“Rapid” Concrete Joint, Crack & Spall Repair

NB 1190

Revised: 07/2013

### MANUFACTURER

**Chemline, Inc.**

**5151 Natural Bridge Ave.**

**St. Louis, MO 63115**

**Phone: (314) 664-2230**

### PRODUCT DESCRIPTION:

**ElastoFil 75** is a two component, 100% solids, no VOC's (Volatile Organic Compound), self-leveling elastomer that exhibits superior performance in a variety of harsh industrial applications. The product displays fast cure times and excellent adhesion to properly primed concrete, wood, steel, or fiberglass surfaces. **ElastoFil 75** is a modified polyurea that can be applied at temperatures ranging from 20°F to 150°F. **ElastoFil 75** has been formulated for interior/exterior concrete joint, crack and spall repair in situations where limited down times are required. The product is also well suited for smoothing control joints or random cracks to accept polyurea, polyurethane and epoxy topcoats.

### PRIMARY APPLICATIONS:

**ElastoFil 75** has been formulated specifically for horizontal concrete/asphalt repairs in the industrial, military, manufacturing, areas and more specifically to repair damage surfaces in airport runways, race tracks, elevated parking decks, balcony decks and more. This product can be hand mixed or applied through plural component cartridge sets or pump systems. It is flexible, yet tough enough to take abuse from industrial equipment, heavy fork lift traffic, commercial airplanes, toe motors, transportation equipment, and steel wheeled carts. Typical applications include:

- AIRPORT RUNWAYS
- RANDOM CRACK & CONTROL JOINT REPAIR
- CONCRETE SPALL REPAIRS
- MANUFACTURING FACILITIES
- FOOD PROCESSING PLANTS
- ENGINEERING ROOM FLOORS
- CANNING AND BOTTLING PLANTS
- CHEMICAL PLANTS
- WASTE WATER TREATMENT PLANTS
- DISTRIBUTION FACILITIES
- MOTOR RACE TRACKS

### APPLICATION EQUIPMENT:

**ElastoFil 75** is developed for use with low pressure, 1:1 ratio, duplex pump systems such as one by AST Systems and a 3/8" x 40 element static mixing wands.

The material can also be applied through plural component cartridge packs or can be hand mixed and poured directly into the crack, joint, or spall.

### AVAILABLE COLORS:

- Concrete Gray
- Black

### ADVANTAGES:

- Easily Applied By Cartridge Or Pump
- Excellent Durability
- USDA Acceptable– Meets FSIS Food Safety Requirements
- Little Moisture Sensitivity
- Cures From 20°F to 150°F
- Excellent Adhesion To Concrete
- 100% Solids, No V.O.C's
- Excellent Thermal Stability
- High Elongation (431%)
- Reduced Down Times, Can Be Top Coated Or Painted
- Excellent Durability

### PHYSICAL PROPERTIES:

TENSIL STRENGTH	ASTM D412	Failure, psi	1431
ELONGATION, %	ASTM D412	%	431
100% MODULUS	ASTM D412	psi	647
200% MODULUS	ASTM D412	psi	913
300% MODULUS	ASTM D412	psi	1132
DIE "C" TEAR STRENGTH	ASTM D624	pli	291
HARDNESS	ASTM D2240	Shore A	84

### TYPICAL PROCESSING PROPERTIES:

GEL TIME (ADJUSTABLE)	MINUTES	2-7
TACK FREE TIME (75°F)	MINUTES	15-20
COMPLETE CURE TIME (75°F)	HOURS	24
RETURN TO FOOT TRAFFIC (75°F)	HOUR	1
RETURN TO INDUSTRIAL TRAFFIC (75°F)	HOUR	1

### CONCRETE APPLICATION RECOMMENDATIONS:

**ElastoFil 75** adheres well to sound, properly prepared concrete substrates. All surfaces should be free of dirt, dust, loose particles, grease, oil, moisture, and old sealant. Always stir, shake or agitate the resin side prior to application. **ElastoFil 75** is formulated to be installed using low pressure, plural component pump systems, plural component cartridges, or can be hand mixed and poured.

### NEW CONCRETE–Control Joints

Allow concrete to cure for a minimum of 90 days prior to installing **ElastoFil 75** in control joints. To properly prepare the joint, insert a diamond blade (of the appropriate width)

into the existing saw cut joint in order to chase out all loose concrete debris and to abrade the joint fascia. Cut or regrind the joint to a minimum depth of 1 inch. The joint should be widened slightly to assure proper adhesion to the new concrete. The freshly ground joint walls should not contain voids, loose particles or moisture. Vacuum or air-blast debris from joint prior to installing **ElastoFil 75**. Backer rod can be placed into the bottom of the joint prior to installing **ElastoFil 75** on industrial floors with mild to moderate fork lift traffic. In major distribution centers with fork lifts running 7 days a week, 24 hours a day, full depth installation of the product is recommended. *“When appropriate, closed cell joint backer rod may be used to prevent material from leaking from joint.”*

### **OLD CONCRETE –Control Joints**

Remove all existing joint sealant. Using a diamond blade saw or right angle grinder, cut or grind the joint vertically (to a 90° angle) to a minimum depth of 1 inch. Spalled edges should be vertically ground as well. The freshly ground joint walls should contain no voids, loose particles or moisture. Vacuum or air-blast the debris from the crack. When necessary, closed-cell joint backer may be used to ensure proper material thickness and prevent “sinkers”.

### **Random Fractures**

Using a diamond blade saw or right angle grinder, chase or grind the joint vertically (to a 90° angle) to a minimum depth of 1 inch. Spalled edges should be vertically ground as well. The freshly ground joint walls should contain no voids, loose particles, or moisture. Vacuum or air-blast the debris from the crack. Closed-cell joint backer is recommended to ensure proper material thickness and prevent “sinkers”.

### **Placement – Interior Joints:**

When utilizing a plural component pump, the mixing wand tip should be placed in the joint. Fill the joint in one directional and continual pass. Overfill the joint by 1/16th of an inch. Let material cure for a minimum of 30 minutes and slice-off level with the concrete slab using a large mastic scraper.

### **Placement - Exterior**

The mixing wand tip should be placed in the joint. Begin filling and fill the joint in one directional and continual pass. Under-fill the joint by 1/16th of an inch.

### **Surface Preparation Procedure: Spalled Concrete**

All concrete surfaces requiring repair with **ElastoFil 75** must be structurally sound, and cleaned using high pressure washing or sand blasting in order to adequately remove the presence of all dirt, grease, oil, animal fats, sealants, coatings, paints, concrete laitance and other unforeseen contaminants. **Figure 1** shows a typical concrete spall being sand blasted prior to actual installation of **ElastoFil 75**.

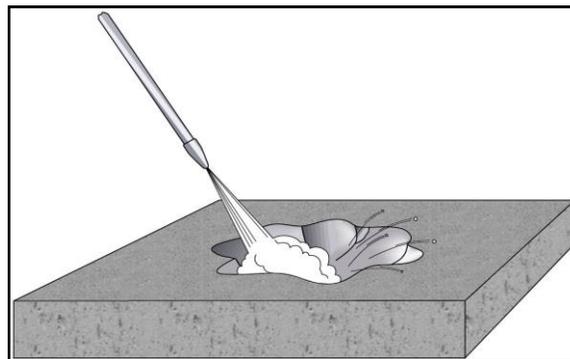


Figure 1

Note! If edges of the spall are not between a 75° - 90° angle, then a vertical groove around the spall should be cut using an angle grinder with an abrasive or dry diamond blade. Cut the groove approximately 1-2 inches deep and chip out the spalled side of the saw cut. Once completed, vacuum or air blow out all remaining concrete dust and debris.

### **Priming Outdoor Concrete Spalls**

Once the concrete spall has been properly prepared, outdoor spalls should always be primed with GatorHyde's **AnvilDeck**, a two component primer that can be brushed, or sprayed onto the spalled area. **Note!** Always apply primer in a single thin coat application, totally covering all the exposed aggregate, but Do Not allow primer to puddle! Once primer has become tacky (but will not stick to your finger) the spall is ready for application of **ElastoFil 75**. **Note!** “Indoor concrete spalls, not subjected to constant moisture or sub-zero freezer repairs, do not require priming with AnvilDeck.”

### **Product Placement**

After primer has been allowed to properly tack out, mix up a calculated amount of **ElastoFil 75** as per specifications, and pour into spalled area. To hand mix the material, you need to mix 1 part A-side to 1part B-side and thoroughly mix with a high speed drill for 30-40 seconds. **Figure 2** shows premixed material being poured into spall. **Note!** On shallow spalls 3/4” to 1-1/2” spall can be filled without the use of aggregate.

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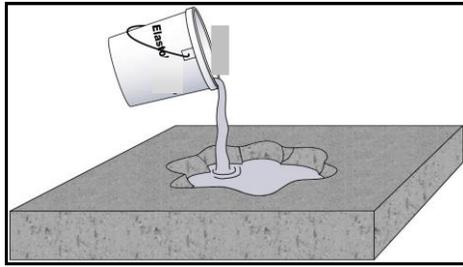


Figure 2

### Product Placement

**ElastoFil 75** can be installed by hand mixing and pouring or through the use of a plural component pump system capable of dispensing a 1:1 ratio material, such as the CONDOR Specialized Pump System, manufactured by GatorHyde. The product can also be applied using either pneumatic or manual, 600x600ml caulking guns. In concrete spalls in excess of 2" in depth, 3/4" or 1/2" washed aggregate may be used as a filler to reduce material consumption and create higher compressive strengths. **Figure 3** shows pre-washed rock being poured into the **ElastoFil 75** which has already been poured into the spall. The picture on the left in **Figure 3** shows the rock at the level of the material. **Note!** "Because of the rapid cure time of this product, **ElastoFil 75** should be poured in shifts, especially where spalls are deep. Once material has been poured into spall, immediately pour in aggregate till flush with the surface of the material."

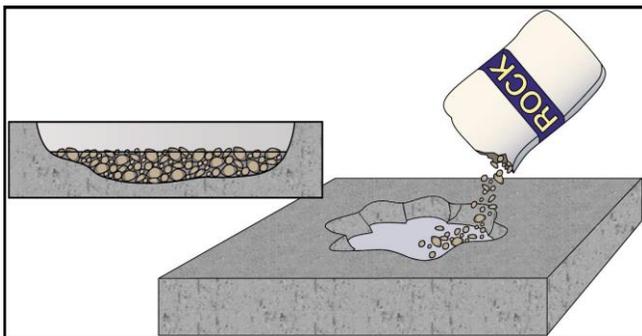


Figure 3

### Product Placed In Lifts

Once material has been allowed to gel, (usually within 3-5 minutes) the spall is ready for the next application of **ElastoFil 75**. **Note!** **Figure 4** shows additional product being poured directly over previous pour. The picture on the left in **Figure 4** shows level of material approximately 1/2 inch from top of spall. When pouring second batch of material, "Do Not Pour To Top Of Spall", and attempt to add additional rock as it will overflow the spall, creating a leveling problem.

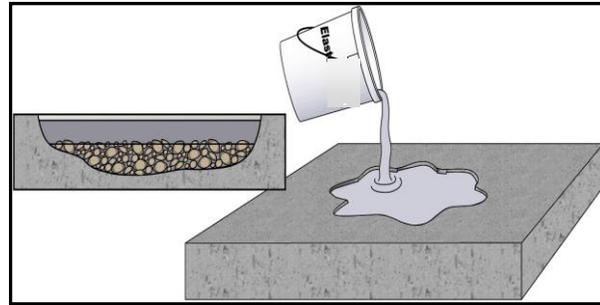


Figure 4

### Final Stage of Spall Repair

The picture on the right in **Figure 5** shows the second layer of rock being added to the second layer of **ElastoFil 75** that was just poured into spall. The picture on the left in **Figure 5** shows second layer of material and rock is still below the surface of the spall. After allowing the second step to gel (3-5 minutes) proceed with Step 3: **ElastoFil 75** is being poured on top of both layers of rock and **ElastoFil 75** (**Figure 6**) and in the picture to the left in **Figure 6** you can see that the material has been poured flush with the surface of concrete. "It is very important NOT to over fill the spall, if a smooth transition across the repaired spall is desired".

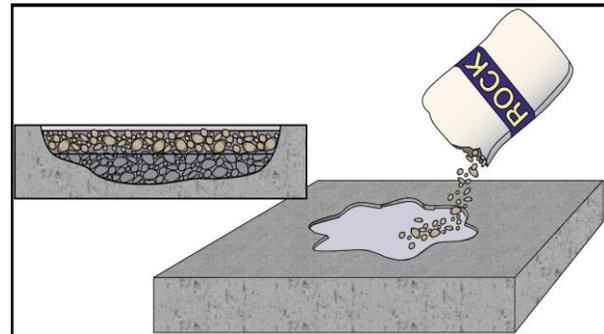


Figure 5

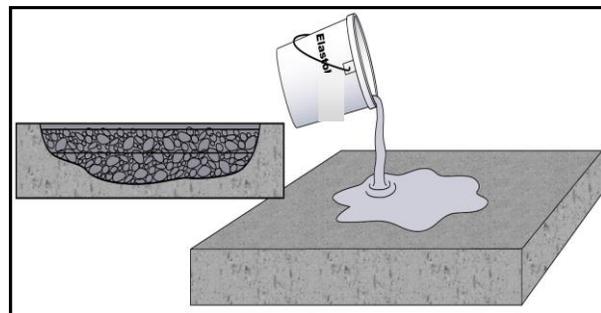


Figure 6

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**Open To Traffic**

Once the spall has been repaired, allow 60-90 minutes prior to exposure of heavy vehicular traffic such as forklifts and steel wheeled carts.

**CHEMICAL RESISTANCE:**

**ASTM D3912 MOD. 3 DAY IMMERSION**

<b>Chemical</b>	<b>Result (25°C)</b>
Brake Fluid (DOT3)	RC
Clorox® (10%)/Water	C,Dis
Diesel Fuel	R
Gasoline	R
Hydraulic Fluid (oil)	R,Dis
NaCl/Water (10%)	R
Potassium Hydroxide (10%)	R
Sodium Hydroxide (10%)	R
Sodium Bicarbonate	R
Sugar/Water (10%)	R
Sulfuric Acid (10%)	R,Dis
Sulfuric Acid (>22%)	NR
Vinegar (5%)/Water	R
Water	R
Xylene	C

**R = Recommend** = Little or no Visible Damage

**RC = Recommend Conditional** = Some Effect-Swelling, Discoloration

**C = Conditional** = Cracking—Wash Down Within One Hour of Spillage to Avoid Effects

**NR = Not Recommended**

**Dis = Discoloration**

**Adhesion Results**

**ASTM D-4541 Elcometer**

Concrete— 1” x 1” joint (no primer) 450 psi  
(concrete failure occurred)

**Clean-Up/Disposal**

Cured product may be disposed of without restriction. The uncured isocyanate and resin portions should be mixed together and disposed of in a normal manner. “Drip Free” containers should be disposed of according to local, state, and federal laws.

**Safety & Handling**

MSDS will be mailed immediately upon receipt of a purchase order or upon request. All personnel should read and understand the safety recommendations. Keep uncured product away from children at all times. Proper isocyanate precautions should be followed.

**Shelf Life & Storage**

One year in factory delivered, unopened drums. Keep away from extreme heat, freezing and moisture. The product should be stored between 60°F and 85°F.

**Packaging**

- 600x600 ml plural component cartridges
- 5 gallon pails
- 55 gallon drums.

**Shipping Information**

**ElastoFil 75** can be shipped via most commercial truck lines or UPS. The shipping class is “55”. The “A” and “B” sides are unregulated.

**Technical Services**

Sales and Customer Support  
(314) 664-2230

[www.chemline.net](http://www.chemline.net)

**Warranty**

The technical data and any other printed information furnished by Chemline are true and accurate to the best of our knowledge. **ElastoFil 75** conforms to in-house quality control procedures and should be considered free of defects. Due to the wide range of applications of this product, it is impossible to assume responsibility for any errors in regard to application, coverage, workmanship, over-spray, or injuries resulting from the use of this product. Liability, if any, for this product will be in the form of replacement materials. The possibility exists to warrant this product on a specific application basis under specific written application instructions from Chemline.

**CARTRIDGE COVERAGE RATE**

Lineal Feet Per 1200 ml Duplex Cartridge Pack  
Theoretical

inches	1/4	1/2	3/4	1
1/4	106	54	36	26
1/2	54	26	18	14
3/4	36	18	12	8
1	26	14	8	6

**COVERAGE RATE**

Lineal Feet per Gallon: Theoretical

inches	1/4	1/2	3/4	1
1/4	308	154	103	72
1/2	154	77	51	38
3/4	103	51	34	26
1	72	38	26	19