

# CRETEX Gel~Grout 75™

Hydrophilic polyurethane grout  
stopping water infiltration.



## PRODUCT DESCRIPTION:

Gel~Grout 75™ is a single-component, hydrophilic polyurethane that cures when mixed with water. Depending on the amount of water in the mixture, Gel~Grout 75™ will vary in consistency from a resilient, rubber-like foam to a flexible gel. The product is capable of absorbing water up to 800 percent of its own mass and then deflects excessive water away from penetrating into a structure. This unique feature allows Gel~Grout 75™ to be used for large water inflow applications. Manhole joints are the primary place of use. Underwriters Laboratories Inc. has tested Gel~Grout 75™ in accordance with the National Sanitation Federation (NSF) standard 61 and has approved this material for contact with potable water.

## PRECAUTIONS:

This material is intended to be used by trained professionals with the proper equipment. The following safety measures are recommended:

- Wear protective gloves, clothing, goggles, hearing protection for noise reduction and hard hats for falling debris.
- Do not eat, drink or smoke while in active contact with these materials.
- Avoid skin contact.
- Wash hands thoroughly with soap and cool water. Never wash the skin with a solvent.
- Anyone experiencing difficulty breathing when working with these materials or showing an allergic reaction should seek fresh air immediately and consult a physician if symptoms persist.

Depending on the scope of the project, it may be advisable to consult a manufacturer's representative during installation.

## HEALTH AND SAFETY:

Material safety data sheets and product labels must be reviewed prior to use or handling the material.

## YIELD:

A typical cartridge will fill a volume of 302 cubic inches (4.94 liters) or a 3/16-inch (4.8-millimeter) crack in an 8-inch (203-millimeter) thick by 8-foot (2.4-meter) high wall.



## MATERIAL STORAGE:

Cartridges should be stored above 60°F (15°C) and below 120°F (48°C). Open cartridges should be used quickly to avoid the material gelling in the cartridge or static mix nozzle. All spills of Gel~Grout 75™ should be disposed by absorbing the grout into an inert material and then transferring the mixture to an open top drum. Do not seal the waste drums for 24 hours to allow the Gel~Grout 75™ to react completely. Dispose of waste material in accordance with state and local regulations.

## PACKAGING:

Gel~Grout 75™ is available in kits consisting of 12 cartridges; 12 static mix nozzles and nuts.

## SITE PREPARATION:

Job site preparation depends on the type of injection method that is selected. Three methods of injection are described below along with the site preparation.

**Crack Injection:** Prepare the worksite by drilling holes at approximately 45 degree angles to intersect the application site at about half the depth of the fissure. Holes are typically drilled on opposing sides of the application site in an alternating pattern. The spacing is dependent on the crack size. Clean the application site of extraneous and loose materials. Gel~Grout 75™ can be injected directly into the construction joints of manholes at a 1 to 1 ratio with water.

**Gel encapsulation:** Gel encapsulation is used for below-grade applications where it is advantageous to use Gel~Grout 75™ as a seal membrane wrap on the outside surface of a structure. Holes are drilled completely through the structure to allow injection to take place from the inside.

**Activated oakum technique:** A method to help reduce or eliminate heavy water inflow in wide cracks or joints is called the activated oakum technique. The process is started by saturating oakum rope or industrial absorbent towels in the grout and then soaking the rope or towels in water. The grout will begin reacting once dipped in the water. Place the saturated pieces into the leaking crack or joint. Push deeply into the crevice using a blunt instrument. Once the water infiltration has been substantially reduced, drill holes and proceed with either the encapsulation or the crack injection method as mentioned above.

## APPLICATION METHOD:

This product can be injected as a single component when sufficient water is present. It is an important to apply a sufficient amount of gel-grout 75™ to allow a satisfactory ratio to be obtained for maximum effectiveness. Visual inspection of injection material penetrating the surrounding drill holes will determine the consistency of the reacted material. Once the injected material has cured at the application site, clean the site. Water blasting is a recommended technique for cleaning the concrete.

## CONCRETE CRACK REPAIR INSTRUCTIONS

### Step 1. Drilling

Drill a series of staggered holes along the full length of the leaking crack. Space the holes 4 to 6 inches apart starting at the bottom. For best results, insert the drill at a 45-degree angle toward the crack.

### Step 2. Flushing with water

Attach the valve and nozzle supplied with the kit to a garden hose. (A pump sprayer may also be used to supply water.) Starting at the bottom, flush each hole while adjusting the water to a low-pressure stream using just enough water to flush the debris from each hole and to wet the entire crack.

**TIP:** Water promotes a foaming reaction of Gel-Grout 75™ within the crack.

### Step 3. Assembling the cartridge

Shake cartridge well before installing nozzle. Remove outer and inner cap on outlet port. Attach applicator nozzle with threaded retaining nut. Place the cartridge in the dispensing gun.

### Step 4. Injecting Gel-Grout 75™

Working from the bottom to the top, insert the nozzle into the first hole and squeeze the cartridge gun three to four times. Depending on the size of the leaking crack, one cartridge should be sufficient to treat approximately 8 feet.

### Step 5. Cleaning and finishing

With a flat-bladed tool, remove any excess grout on the exterior of the crack. Patch any holes using a putty knife, with concrete material.

**Table 1: Physical Properties of Uncured Materials**

	Gel-Grout 75™ Part A	Measurement	Test Method
Color	Light brown		Visual
Specific gravity	1.1		ASTM D891
Viscosity at 77°F (25°C)	800-900	Centipoise	ASTM D1638
Storage stability	12	Months	
pH	Not established		
Toxicity	Non-toxic		
Hazard class	Not regulated		
Solids	100	Percent	
Corrosiveness	Non-corrosive		
Flash point	>220 (>104)	Degrees Fahrenheit (Celsius)	

**Table 2: Physical Properties of Cured Materials**

	1:1	Measurement	Test Method
Gel time	110	Seconds	
Tensile strength	431:1	psi	ASTM D638
Elongation	462.1	Percent	ASTM D638
Die-C tear	49	pli	ASTM D624
Physical form	Resilient foam		

Note: Table 2 represents physical properties at a range of resin to water ratios. These values were generated while simulating a situation where Gel-Grout 75 was applied under pressure similar to typical field condition applications.

**Table 3: Temperature Effects on Viscosity**

Temperature		Viscosity
Degrees Fahrenheit	Degrees Celsius	Centipoise
50	10	1,960
68	20	1,020
77	25	850
86	30	750
104	40	390

### Processing parameters

The unique applications and places where Gel-Grout 75™ is used exposes the product to a wide range of weather conditions and temperatures. Temperature of the chemical affects viscosity (liquid thickness) of the material. Table 3 illustrates the approximate viscosity levels of Gel-Grout 75™ when exposed to various temperatures during the time of injection.

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