

## **POLYURETHANE CRACK INJECTION**

### **PART I – GENERAL**

This specification is to detail the process of sealing cracks and/or joints with Hydrophobic Polyurethane Chemical Grout (HPCG).

#### **A. Work Included:**

Include all materials, labor, tools, and equipment to perform repair of cracks/joints in concrete.

#### **B. Delivery, Storage and Handling:**

1. Deliver the specified product in original, unopened containers with the supplier's name, product labels, product identification, MSDS, and batch numbers.
  
2. Store and condition the specified product as recommended by the supplier.

#### **C. Job conditions:**

Precautions should be taken to avoid damage to any surface near the work zone due to mixing, handling, and/or placement of the specified materials.

### **PART II – PREPARATION**

The surfaces of floors, walls, etc. to be treated shall be cleared of all debris and attachments to allow free and clear access to the work, and also open access for monitoring of grout travel.

### **PART III – APPLICATION**

#### **A. Material**

- a. Hydrophobic Polyurethane Chemical Grout shall be Mountain Grout Flexible as supplied by Green Mountain International, Inc, 235 Pigeon St., Waynesville, NC 28786 (800-942-5151) or equal.
- b. HPCG must be shipped as non-hazardous and contain no solvents or VOC's.
- c. HPCG must have been tested for potential leachate of heavy metals (soil contamination) under TCLP Extraction method 1311, Metals Method 6010 and Manual Cold Vapor Technique, Method 7470. Methods supplied by the USEPA office of Solid Waste and Emergency Response.
- d. HPCG pump cleaner/flush must be solvent free and non-flammable.

#### **B. Application:**

1. All cracks and/or joints shall be sealed with the HPCG.
  - a. Preparation: Holes shall be drilled at an approximate 45 degree angle, offset to intersect the joint/crack at approximate mid-depth or to a maximum of 18". In thin concrete sections holes may be drilled directly into the joint/crack.
  
  - b. Application: Holes and Packer Devices: 2 styles of packers are

acceptable, both available from Green Mountain International, Inc.

- i. 5/8" diameter holes shall be drilled for Mechanical Type Packers, which are inserted into the drilled hole and secured into place by an expandable rubber section as the packer is tightened.
  - ii. 3/8" diameter holes shall be drilled for "bang-in" type packers, which are hammered into the drilled hole.
- c. Hole Spacing: Holes shall be placed at appropriate intervals typically 12" apart to ensure full infiltration of the joint/crack with the HPCG. In narrow (hairline) cracks holes will be closer together. In wide cracks they may be farther apart. Visually monitor grout flow from outside of crack.
- d. Mixing Procedure: HPCG shall be mixed by very gradually pouring component "B", accelerator, into component "A" while carefully stirring so as to not entrain air into the mixture.
- e. Placement: HPCG shall be pumped through a piston pump capable of producing discharge pressures of >250 psi.
- f. Crack may be actively leaking at time of application. This is, in fact, preferred.

Pumping shall proceed from packer to packer, with multiple passes on each hole until either stall pressure is achieved or raw grout flow is observed from the crack/joint subsequent to pumping upon that hole.

## 2. Cleaning

All excess HPCG shall be cleaned from the area and properly disposed. Leave finished work and work area in a neat, clean condition.

**(To be used as a general guideline. All projects are unique.)**