

DURAL AQUA-FIL GUIDE SPECIFICATION

Hydrophilic Polyurethane Grouting System

DURAL AQUA-FIL is a single-component hydrophilic polyurethane compound that is injected in concrete and other sound natural substrates to stop water from entering into occupied or unwanted places. DURAL AQUA-FIL follows the path of water into fine cracks and fissures within the substrate. DURAL AQUA-FIL forms a water-tight seal within cracks and joints, while providing good chemical resistance.

Note: The paragraphs below are meant to be incorporated into Parts 2 and 3 of a standard CSI 3 Part Format specification, the General Structural Notes, or directly onto the plans. They must be carefully reviewed by a qualified design professional and edited to meet the requirements of the project and governing building codes. Coordinate with other specification sections and drawings. In no case shall these Guide Specifications be considered to be Contract Documents or serve as installation instructions for the product being discussed. In any cases of discrepancy the manufacturer's most recently published data sheet shall take precedent.

03 65 00 CHEMICAL GROUT INJECTION

1.01 RELATED WORK:

- A. Section <<insert section>> Concrete Repair

1.02 QUALITY ASSURANCE

- A. Installer Qualifications: Experienced installer who has successfully completed 5 jobs of similar size and scope in the prior 5 years.

1.03 QUALITY ASSURANCE

- A. Chemical Grout manufacturer shall have ISO 9001 Quality Certification.

1.04 SUBMITTALS

- A. Comply with Section <<insert section>> Submittal Procedures.
- B. Product Data: Submit manufacturer's product data including surface preparation installation, and curing instructions for each type of product indicated.

PART 2: PRODUCT

{Note to Specifier: This specification covers the performance characteristics and procedures for application of a hydrophobic polyurethane grout designed to be injected into cracked concrete or stone surfaces for the purpose of sealing against moisture intrusion

- A. Hydrophilic Polyurethane Grout:

1. ASTM D 638: 360% Elongation
2. ASTM D 1638, Viscosity @ 77 degrees F (25 degrees C): 500 cps
3. ASTM D 638: Tensile Strength, 25 psi
5. **Basis of Design Product:**
 - a. **Dural Aqua-Fil by The Euclid Chemical Co.**
www.euclidchemical.com

PART 3: EXECUTION

3.01 SURFACE AND CRACK PREPARATION

- A. Surface and Crack Preparation: Utilizing proper means, clean exterior of surface so that full extent of crack/joint can be seen.
 1. Concrete 8" thick and over:
 - a. Starting at lowest point of crack; triangulate position of first hole to be drilled, so that it will intersect crack at a 45° angle, half-way through thickness of concrete. Drill 5/8" (16 mm) hole in this position and ensure that bit used is long enough to pass through crack. Drill next hole in same manner on opposite side of crack. Vertical distance between holes shall be equal to thickness of concrete. Moving up crack, continue to drill holes in the same manner along entire length of crack receiving the grout.
 2. Concrete less than 8" thick:
 - a. Starting at lowest point of crack drill 5/8" diameter holes into face of crack. Depth of holes shall be approximately half thickness of concrete. Continue drilling holes up crack at spacing intervals equivalent to concrete thickness.
 3. Install 5/8" (16 mm) injection packers into the drilled holes and tighten.
 4. Inject water through packers to make sure they don't leak around sides, and to flush out any dust and debris that is in crack due to drilling process.

3.02 CHEMICAL GROUT INJECTION

- A. Mix chemical grout per manufacturer's written instructions.
- B. Grout Injection: Install and inject components per manufacturer's written instructions. Once the injection packers have been set and the drilled holes and crack have been flushed out with water, start at the lowest point of the crack and work upwards. Pump polyurethane grout into the packer until foaming material comes out the face of the crack and starts to approach the next packer.

- D. For large cracks and joints, oakum rope or a similar open celled structure material can be used to soak in polyurethane grout and then placed into crack or joint.
- E. Once polyurethane grout has cured, packers shall be removed or cut-off, flush with the surrounding surface. Grout that has cured outside of face of crack shall be cut-back with a margin trowel or similar scraping tool. Packer holes shall then be filled in per manufacturer's instructions and finished as desired.

3.03 CLEAN UP

- A. Use all appropriate protective equipment. Avoid contact with active grout. Use hydrophobic polyurethane grout manufacturer's recommended pump rinse material to clean out the lines of the injection equipment

END OF SECTION