



DURAL AQUA-FIL

HYDROPHILIC POLYURETHANE GROUT

PACKAGING

5 gal (19 L) pail

Code: 043D 00

55 gal (208 L) drum

Code: 043D 55

Dural Pump Rinse:

5 gal (19 L) pail

Code: 043F 05

CLEAN UP

Use all appropriate protective equipment. Avoid contact with the active grout. Use DURAL PUMP RINSE to clean out the lines of the injection equipment. DURAL PUMP RINSE can be left in the lines as a primer, prior to the next project. Be sure to expel all DURAL PUMP RINSE from the lines prior to the next grouting job, for it will affect the curing capability of the grout.

SHELF LIFE

3 years in original, unopened containers. The product is moisture sensitive and needs to remain in an airtight container.

DESCRIPTION

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.

PRODUCT CHARACTERISTICS

FEATURES/BENEFITS

- Tenacious bond to wet and dry substrates
- Seeks out water within the crack and all its fissures
- Provides good chemical resistance
- Excellent elongation to handle moving cracks and joints
- Can seal small and large cracks within concrete and other natural substrates

PRIMARY APPLICATIONS

- Leaking cracks & joints
- Water & wastewater treatment facilities
- Below grade walls subject to high water tables
- Repair of faulty or misplaced waterstops
- Mines & tunnels
- Sewers & manholes

TECHNICAL INFORMATION

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

Test Method	Typical Properties - Liquid	Results
ASTM D1638	Viscosity @ 77 °F (25 °C)	500 cps
-	Specific Gravity	1.16
-	Physical State	Liquid
-	Color	Pale Yellow

Test Method	Typical Properties - Cured	Results
ASTM D1622	Density	5 lb/ft ³ (80 kg/m ³)
ASTM D638	Elongation	360%
ASTM D638	Tensile Strength	335 psi (2.3 MPa)
ASTM C273	Shear Strength	153 psi (1.0 MPa)

Typical Reaction Profile	
Initial Foam	30 seconds
Reaction Time	6 minutes

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DIRECTIONS FOR USE

Surface & Crack Preparation: To ensure the crack or joint is treated properly, clean the exterior of the concrete surface so that the full extent of the crack or joint can be seen. This will aid in properly locating the injection holes to be drilled. To properly locate holes, start by determining the thickness of the concrete section that is to be injected. Layout alternating hole locations on either side of the crack/joint running full length of the crack/joint. Space the holes running parallel to the crack at a distance equal to the thickness of the concrete being injected. Place the holes at a proper distance from the crack or joint so that a hole drilled at a 45 degree angle will intersect the crack at the mid-point of the concrete thickness. Adjust the hole layout as necessary to assure that drilling operations do not come into contact with existing reinforcing steel or other embedded items. Drill 5/8" (16mm) holes at 45 degrees to intersect the crack/joint at the mid-point of the concrete thickness. Ensure that the drill bit is long enough to intersect the crack. Clear drilled holes of all dust, debris and laitance. Install 5/8" (16mm) injection packers into the holes and tighten. Inject water through the packers. Ensure that water injected into the packers is flowing through the holes and crack/joint and ensure that the packers are not leaking.

In cases where drilling holes at an angle will result in chipping or breaking of the concrete, the holes may need to be drilled directly into the face of the crack/joint. In such cases the distance between the holes should be equal to the concrete thickness and the hole depth should be one half of the concrete thickness.

Mixing: Prior to injecting DURAL AQUA-FIL, properly stir the material thoroughly. Do not use high speed mixing equipment, for that will "whip" air into the product.

Placement: Once the injection packers have been set and the drilled holes and crack have been flushed out with water, the injection of the material can begin. Start at the lowest point of a vertical crack and work upwards. Pump DURAL AQUA-FIL into the packer until foaming material comes out the face of the crack and starts to approach the next packer. On a horizontal crack, start at the end that was first installed and flushed with water. The more water left in the crack and injection site, the better. Move the injection head to the second packer and repeat until you have moved the entire length of the crack. Follow the injection of DURAL AQUA-FIL with a good flush of water through the ports. DURAL AQUA-FIL uses water to react and cure. A standard airless paint pump can be used for the injection of the grout and water. Typical injection pressure into cracks is 200 to 3,000 psi (1.4 to 20 MPa), depending on the width and depth of the crack. For large cracks and joints, oakum rope or a similar open celled structure device can be used to soak in DURAL AQUA-FIL and then placed into the crack or joint. Once the DURAL AQUAFIL has cured, the packers can be removed or cut off, flush with the surrounding surface. The grout that has cured outside of the face of the crack can be cut back with a margin trowel or similar scraping tool. The packer holes can then be filled in with Euclid Chemical's SPEED PLUG hydraulic cement and finished as desired.

PRECAUTIONS/LIMITATIONS

- Colder temperatures will affect the viscosity and setting times of the product.
- Avoid exceeding 90 °F (32 °C) when warming product.
- Water used to react DURAL AQUA-FIL must be in the pH range of 3 to 10.
- Store material in moisture-free packaging. Atmospheric moisture may get to product causing a foam "head" inside of pail. This can be peeled off and the material below can still be usable.
- In all cases, consult the Safety Data Sheet before use.

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