



EUCLID CHEMICAL

Vertical/Overhead Repair

DURALTOP GEL

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DURALTOP GEL

Vertical and Overhead Structural Repair Mortar with Corrosion Inhibitor

Description

DURALTOP GEL is a rapid-setting, two-component, polymer modified, silica fume enhanced, cementitious repair mortar for vertical/overhead applications. DURALTOP GEL contains an integral corrosion inhibitor for added protection.

Primary Applications

- Structural concrete repairs
- Exterior or interior, above or below grade
- Vertical and overhead concrete and masonry repairs

Features/Benefits

- Rapid setting, polymer modified repair mortar
- Achieves high compressive, flexural and bond strengths quickly
- Contains an integral corrosion inhibitor
- Non-sag, high build properties
- Pre-proportioned unit
- Silica fume enhanced
- ▲ Can contribute to LEED points

Technical Information

Material Properties @ 75°F (24°C)

Compressive Strength, psi (MPa) ASTM C 109 (Mod.)

4 hours	1,150 (7.9)
1 day.....	4,000 (27.6)
3 days.....	6,100 (42.1)
7 days.....	7,050 (48.6)
28 days.....	8,500 (58.6)

Flexural Strength, psi (MPa) ASTM C 293

1 day.....	2,000 (13.8)
28 days.....	2,180 (15.0)

Bond Strength, psi (MPa) ASTM C 882 (Mod.)

7 days.....	2,100 (14.5)
28 days.....	2,475 (17.1)

Tensile Bond Strength CAN A23.2-6b

28 days..... greater than concrete

Splitting Tensile Strength, psi (MPa) ASTM C 496

28 days.....750 (5.2)

Freeze/Thaw Resistance NYSDOT 502.3P

50 cycles..... 0.18% Weight Loss

Length Change ASTM C 157

7 days.....-0.040%
28 days.....-0.062%

Vertical/Overhead Patching NYS DOT 701.08

..... passes

Chloride Permeability ASTM C 1202

160 coulombs “very low”
Typical results obtained under laboratory conditions.

Packaging/Yield

Part A (powder) 44 lb (20 kg) bag. Part B (liquid) 1 gal (3.8 L) container. One kit of DURALTOP GEL will yield approximately 0.4 ft³ (0.01 m³).

Shelf Life

1 year in original, unopened package

Coverage

Applied at the following thicknesses, one bag will cover:

1/4" (6.3mm)	19.2 ft ² (1.78 m ²)
1/2" (12.7 mm)	9.6 ft ² (0.89 m ²)

Coverage rates are approximate and are for estimating purposes only.

Directions for Use

Surface Preparation: Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface to achieve a surface profile equal to CSP 6 - 8 in accordance with ICRI Guideline 310.2. Properly clean profiled area.

Priming: Concrete and exposed steel should be primed with a spray or brush coat of DURALPREP AC. The DURALPREP AC must be thoroughly dry prior to the application of DURALTOP GEL. Alternatively, a Saturated Surface Dry (SSD) concrete surface can be primed with a scrub coat of DURALTOP GEL. The repair must be made before the scrub coat dries out.

Mixing: Mix only one kit of DURALTOP GEL at a time. In a clean container, add 80% of liquid Part B. Using a slow speed (400 to 600 rpm) drill and a "Jiffy" mixer, gradually add the powder (Part A) to produce a mortar with a smooth, no lumps consistency. Add remaining liquid, if necessary, to get desired consistency. Do not mix longer than 3 minutes.

Application: Air and surface temperature must be above 45°F (7°C). Apply DURALTOP GEL immediately after mixing. The working time is about 15 minutes, and finish time about 20 to 30 minutes, depending on temperature, humidity and finish desired. The surface must be SSD at the time of application. Before the scrub coat dries, trowel the material against the edge, and gradually work towards the center of the repair area. Apply at a minimum thickness of 1/8 in (0.32 cm) and in lifts of no more than 2 in (5.08 cm). Each lift should be allowed to reach final set, then scored to produce a roughened surface before applying the next lift. Consolidate, screed, and then finish following standard practices.

Curing: Follow standard ACI guidelines for curing. In the case of high temperature, high wind, or low humidity causing rapid surface drying, use wet burlap/plastic or a water based curing compound. Protect from rain and freezing temperatures before the product is sufficiently cured. DO NOT use solvent based curing compounds.

Clean-Up

Clean tools and equipment with water before DURALTOP GEL hardens. Hardened DURALTOP GEL will need to be mechanically removed from equipment.

Precautions/Limitations

- Store at temperatures between 45°F and 90°F (7°C to 32°C), protected from moisture.
- Protect from freezing.
- Mix only one kit at a time.
- DO NOT MIX DURALTOP GEL LONGER THAN 3 MINUTES.
- Do not apply DURALTOP GEL below 45°F (7°C).
- Apply immediately after mixing.
- Delayed application will reduce adhesion.
- Minimum thickness 1/8" (3.2 mm), maximum per lift 2" (50.8mm).
- In all cases, consult the Safety Data Sheet before use.

Rev. 2.17

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