



# TECHNICAL DATA SHEET

## DURALTOP® GEL

### Vertical and Overhead Polymer Reinforced Repair Mortar

03930

CONCRETE REHABILITATION  
CONCRETE

TAMMS INDUSTRIES  
NOVEMBER 2003 (Replaces 2/03)

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1. **DESCRIPTION:** DURALTOP GEL is a fast setting, two component, polymer reinforced, non sag, cementitious patching and repair mortar.

#### FEATURES AND BENEFITS

- *Fast setting, polymer modified repair mortar*
- *Achieves high, early compressive, flexural and bond strengths*
- *Contains a migratory corrosion inhibitor*
- *Non-sag, high build properties*
- *Preproportioned unit*

#### APPLICATIONS

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

2. **SURFACE PREPARATION:** Surfaces to receive DURALTOP GEL must be structurally sound, clean, and free of dirt, oil, and all other contaminants. Abrasive blast, shotblast or mechanically abrade the surface to remove laitance, coatings, deteriorated concrete, or other substances which might interfere with adhesion. Clean and prime exposed steel and reinforcing with DURALPREP A.C. Abrade non absorptive surfaces to obtain a proper profile for good adhesion. Flush area with clean water to remove all dust and to dampen the concrete. Remove any puddles before applying DURALTOP GEL. The surface should remain damp during placement.

3. **MIXING INSTRUCTIONS:** Mix only one kit of DURALTOP GEL at a time. In a clean container, add 4/5 of liquid Component B. Using a 1/2" slow speed (400-600 rpm) drill and a "Jiffy" mixer, gradually add the powder (Part A) to produce a mortar with a smooth consistency and without lumps. Add remaining liquid, if necessary, to some of the mix to obtain a slurry or scrub coat, or to get desired consistency. Do not mix longer than 3 minutes.

4. **APPLICATION TECHNIQUES:** Air and surface temperature must be above 45°F (7.22C). Apply DURALTOP GEL immediately after mixing. The working life is about 15 minutes, and finish time about 20 to 30 minutes, depending on temperature, humidity and finish desired. The surface must be damp at the time of application. Using a slurry or a scrub coat of DURALTOP GEL helps achieve maximum bond strength and thickness per lift. 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 inch (0.32 cm), and in lifts of no more than 1.5 inches (3.81 cm). Each lift should be allowed to reach final set, and then scored to produce a roughened surface before applying the next lift. Consolidate, screed, and then finish following standard practices.

5. **CURING:** Follow standard ACI guidelines for curing. In case of high temperature, high wind, or low humidity causing rapid surface drying, use wet burlap/plastic or a water based curing compound. Pretesting of the curing compound is recommended. Protect from rain and freezing. DO NOT use solvent based curing compounds.

#### Material Properties at 75°F

Test Method	Criterion	Result
<b>ASTM C109 (Mod.)</b>		
Compressive Strength, psi	4 hours	1,150
	1 day	4,000
	3 days	6,100
	7 days	7,050
	28 days	8,500
<b>ASTM C293</b>		
Flexural Strength, psi	1 day	2,000
	28 days	2,180
<b>ASTM C882 (Mod.)</b>		
Bond Strength, psi	7 days	2,100
	28 days	2,475
<b>ASTM C496</b>		
Splitting Tensile Strength, psi	28 days	750
<b>NYSDOT 502.3P</b>		
Freeze/Thaw Resistance	50 cycles	0.18% Weight Loss
<b>CRD 621/NYSDOT 701.13</b>		
Expansion/Contraction:	7 days	0.2%
Expansion - Contraction -	7 days	0.000%
<b>NYSDOT 701.08</b> vertical/overhead patching		passes
<b>ASTM C1202</b>		
Chloride Permeability	160 coulombs	"very low"

Typical results obtained under laboratory conditions.

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6. **PACKAGING:** Part A (Powder) 44 lbs./bag. Part B (Liquid). 1 gal. container.  
**Storage:** 40-90°F, protected from moisture. Protect from freezing.  
**Shelf Life:** 1 year, unopened in protected storage.
7. **YIELD:** One kit of DURALTOP GEL will yield approximately 0.4 cu.ft.
8. **CLEAN-UP INSTRUCTIONS:** Clean tools and equipment using water before DURALTOP GEL hardens. Scrape or mechanically remove hardened DURALTOP GEL from equipment.
9. **CAUTIONS:** Mix only one kit at a time. DO NOT MIX DURALTOP GEL LONGER THAN 3 MINUTES. Do not allow Part B liquid to freeze. Dampen surfaces before applying. Do not apply DURALTOP GEL below 45°F (7.22C). Apply immediately after mixing. Delayed application will reduce adhesion. Minimum thickness 1/8", maximum per lift 1-1/2".
10. **ENVIRONMENTAL AND SAFETY PRE-CAUTIONS:** Part A contains portland cement which is alkaline on contact with water. Do not breathe dust. May cause delayed lung injury (Silicosis). IARC reports Crystalline silica may cause cancer in humans. Irritating to eyes and skin. Avoid splashing into eyes or contact with skin. In case of eye contact, flood eyes repeatedly with potable water and call a physician. DO NOT RUB EYES. Wash skin thoroughly after handling and before smoking or eating. Use adequate ventilation. Part B contains a polymer. Avoid breathing vapors or mist. Irritating to eyes and skin. Avoid splashing into eyes or contact with skin. In case of eye contact, flood eyes repeatedly with potable water and call a physician. DO NOT RUB EYES. Wash skin thoroughly after handling and before smoking or eating. Use adequate ventilation. **KEEP OUT OF REACH OF CHILDREN AND ANIMALS.** Consult Material Safety Data Sheet for complete product safety information. EMERGENCY RESPONSE PHONE NUMBER: (800) 862-2667 TAMMS or (800) 424-9300 CHEMTREC.

11. **TECHNICAL SERVICE:** For application procedures or surface conditions not specified above, please contact:

TAMMS INDUSTRIES, INC.  
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