



TECHNICAL DATA SHEET

DURALTOP® FAST SET

Polymer Reinforced Cementitious Repair Mortar

03930

CONCRETE REHABILITATION
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TAMMS INDUSTRIES
NOVEMBER 2003 (Replaces 1/00)

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

FEATURES AND BENEFITS

- *Fast setting, polymer modified repair mortar*
- *Achieves high early compressive, flexural and bond strengths*
- *Permits foot traffic in 2-4 hours, pneumatic tire traffic in 6-8 hours*
- *Contains a migratory corrosion inhibitor*
- *Resistance to abrasion and deicing chemicals*
- *Increased resistance to freeze-thaw*
- *Does not form a vapor barrier*
- *Easy to use, pre-proportioned unit*

APPLICATIONS

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

2. **COMPOSITION AND MATERIAL:** DURALTOP FAST SET Component A is a proprietary compound of portland cements, finely graded aggregates, a migratory corrosion inhibitor and chemical additives. DURALTOP liquid Component B is a proprietary formulation of polymer based binders.

3. **SURFACE PREPARATION:** Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and clean of dust, dirt and other contaminants. Edges of the area to be patched must be vertical, chipped or steep angle cut to a minimum depth of 1/4". Clean and prime exposed steel and reinforcing with DURALPREP A.C. Abrade 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 FAST SET. The surface should remain damp during placement.

4. **MIXING INSTRUCTIONS:** Mix only one kit of DURALTOP FAST SET 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 to get desired consistency. Do not mix longer than 3 minutes. If extending with an aggregate, use of a mortar mixer is recommended. The aggregate should be added after the powder is added to the liquid. To fill areas deeper than 1 inch (2.54 cm), clean saturated surface dry, 3/8 inch (0.95 cm) pea rock or chip stone can be used to extend DURALTOP FAST SET. Do not exceed 40 pounds (18.1 kg) of aggregate for each unit of DURALTOP FAST SET.

5. **APPLICATION TECHNIQUES:** Air and surface temperature must be above 45°F (7.22°C). Apply DURALTOP FAST SET immediately after mixing. The working life is about 15 minutes, and finishing time about 20 to 40 minutes, depending on temperature, humidity and finish desired. Apply DURALTOP FAST SET to the predampened surface. Mortar should be scrubbed into the surface for best adhesion. Trowel the material against the edge, and gradually work towards the center of the repair area. Each lift, a maximum of 1" at a time, 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.

6. **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. Pre-testing 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	Results
ASTM C109 (Mod.) Compressive Strength, psi	4 hours	920
	1 day	4,000
	3 days	5,200
	7 days	5,890
	28 days	7,010
ASTM C293 Flexural Strength, psi	7 days	2,100
	28 days	2,800
ASTM C882 (Mod) Bond Strength, psi	7 days	1,400
	28 days	2,300
ASTM C496 Splitting Tensile Strength, psi	28 days	700
ASTM C1202 Chloride Permeability		120 coulombs "very low"
ASTM C666 Freeze Thaw Durability Factor	300 cycles	99.4%
Typical result obtained under laboratory conditions.		

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7. **YIELD:** One kit of DURALTOP FAST SET will yield approximately 0.55-0.60 cu. ft. (0.015 cu.m). With 40 pounds (18.14 kg) of pea rock the yield will approximately 0.75 cu.ft. (0.02. cu.m.).

8. **CLEAN-UP INSTRUCTIONS:** Clean tools and equipment using water before DURALTOP FAST SET hardens. Scrape or mechanically remove hardened DURALTOP FAST SET from equipment.

9. **PACKAGING:** 60 lb. bag as Powder Part A. 1 gallon liquid as Part B.

Storage: 40°-90°F in protected, dry storage. Protect from freezing.

Shelf Life: 1 year.

Freight Class: 55.

10. **CAUTIONS:** Mix only one kit at a time. DO NOT MIX DURALTOP FAST SET LONGER THAN 3 MINUTES. Do not allow components to freeze. Dampen surfaces before applying. Do not apply DURALTOP FAST SET below 45°F (7.22°C). Apply immediately after mixing. Minimum application thickness 1/4", maximum thickness per lift 1". Do not use solvent base curing compounds.

11. **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 AWAY FROM CHILDREN AND ANIMALS.**

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

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