

SPECCRETE® SPECCOTOP 111 TWO COMPONENT CEMENTITIOUS SCREED MORTAR

PRODUCT DESCRIPTION: Speccrete® SpeccoTop 111 is a two component, polymer modified, cementitious, fast setting concrete repair mortar for use in thin and thick section concrete patching and overlays. Speccrete® SpeccoTop 111 can be used as a structural repair mortar for interior or exterior applications, both above and below grade. Recommended uses include parking deck repairs, ramps, walkways, roadways, pool decks, patios, as well as interior applications such as industrial plants or warehouse floors that are subjected to heavy loads, abrasion or impact. Speccrete® SpeccoTop 111 exhibits a high bond strength and provides excellent freeze thaw resistance against the penetration of deicing salts and other contaminants.

BENEFITS: HIGH COMPRESSIVE, BOND, AND FLEXURAL STRENGTHS...SUPERIOR ABRASION RESISTANCE TO HEAVY LOADS AND TRAFFIC VERSUS CONVENTIONAL PORTLAND CEMENT TOPPING...RAPID HARDENING MORTAR WHICH OPENS QUICKLY TO BOTH FOOT TRAFFIC IN 4-6 HOURS AND PNEUMATIC TIRES IN 8-12 HOURS AT 70 F...HIGH EARLY STRENGTHS...INCREASED FREEZE/THAW DURABILITY AND RESISTANCE TO DEICING SALTS...EASY TO TROWEL CONSISTENCY FOR HORIZONTAL APPLICATION...THERMAL EXPANSION SIMILAR TO CONCRETE FOR LONG TERM DURABILITY

COMPOSITION: Blended cements, selected aggregates, acrylic copolymers and proprietary chemical additives. This product contains no calcium chloride or added chlorides that contribute to reinforcement steel corrosion or efflorescence.

TECHNICAL DATA: All tests run at 15.20% liquid to powder ratio = 4.0 quarts bonding liquid /55 lb pdr

WORKING & PERFORMANCE PROPERTIES @ 70°F (21°C)- (APPROXIMATE):	
Initial Set per :	35 minutes
Final Set per :	1 hour
Yield per 55 lb. / 25 kg bag mixed unit	0.43 cu. ft./ unit (as is) / 0.56 cu. ft. / unit (extended with pea gravel at 25 lb/bag)
Coverage per unit:	24 square feet at 1/4 inch thickness

COMPRESSIVE STRENGTH PER ASTM C-109	
1 day	4410 psi (30.3 Mpa)
3 days	6550 psi (45.1 Mpa)
7 days	7520 psi (51.7 Mpa)
28 days	9200 psi (63.3 Mpa)

BOND STRENGTH PER ASTM C-1042	
1 day	1020 psi (7.0 Mpa)
7 days	1750 psi (12.1 Mpa)
28 days	2000 psi (13.8 Mpa)

FLEXURAL STRENGTH PER ASTM C-78	
7 days	1270 psi (8.7 Mpa)
28 days	1680 psi (11.6 Mpa)

SPLITTING TENSILE STRENGTH PER ASTM C-496	
28 days	700 psi (4.8 Mpa)

FREEZE THAW RESISTANCE PER ASTM C-666	
300 Cycles	99.4%

SURFACE PREPARATION: Proper surface preparation of the concrete substrate is critical for successful application of the Speccrete® SpeccoTop 111. The substrate must be in a structurally sound condition, free of gaping cracks (wider than hairline), and free of oil, grease, dirt and all other surface contaminants that would interfere with adhesion of the Speccrete® SpeccoTop 111. The ideal substrate to be covered should have some absorptive porosity or texture (surface profile), and should not repel water when applied. Mechanically abrade the surface to a minimum of 3/8" (0.95cm) to achieve a surface profile equal to CSP 5-6 in accordance with ICRI guideline 03732. Properly clean the profiled area. All cracks, spalls, or holes need to be patched or repaired prior to application. This type of cleaned, profiled surface can be obtained by use of pressure washing, sand blasting, or blast tracking (steel shot).

SURFACE PREPARATION (continued): Pre dampen the substrate prior to application Speccrete® SpeccoTop 111 so that it is uniformly damp to a saturated surface dry condition, but has no free standing water or puddles. **JOINTS:** All expansion joints within the existing concrete need to be kept open and should not be covered by the Speccrete SpeccoTop 111. Placement of Speccrete® SpeccoTop 111 over expansion joints or other moving cracks and joints that are not repaired beforehand or allowed to expand can telescope or transfer through to the surface causing additional cracking or possible delamination of the material. Non moving cracks or spalls can be repaired with Specco 101 LVHM injection epoxy, taking care to keep the epoxy inside the crack and not overfilled onto the concrete surface. Once the SpeccoTop111 overlay is installed, a control joint can be sawed through the substrate at a minimum of 1/3 the depth to allow for continued movement. This joint should be sawed as close as possible to the original crack.

MIXING: In a clean container, add approx. 7/8 gallon (7 pints) of Speccobond 20% liquid (Component B) to achieve the normal "pancake batter- semi-flowable" consistency, Using a ½ inch" Jiffy type paddle mixer at slow speed, gradually add powder (Component A) and mix for approx. 3-5 minutes to produce a mortar with a smooth uniform consistency and without lumps. Add remaining Speccobond 20% Component B (liquid) to mix if a more loose or flowable consistency is desired. Do not add any water. Pea gravel or chip "fractured" stone may be added when the depth of the surface exceeds 0.50" (1.30 cm), and should be added when the depth exceeds 1.0" (2.50 cm). When extending with aggregate, the use of a mortar mixer is recommended for convenience. Add the pea gravel after the powder is added to the liquid. The recommended maximum addition rate of dry pea gravel is 25 lbs (approx. 2.0 gallons by loose volume) per 55 lb of powder. Small (0.2 to 0.3 quart) additions of extra bonding liquid or water may be needed after high pea gravel additions to maintain the proper "pancake batter- semi-flowable" consistency depending upon ambient conditions and required flow. Warmer temperatures or lower humidity levels may require use of the higher liquid level amount. Note that variations or inconsistent measuring in the amount of water added will result in differences in color and texture. **APPLICATION:** When using as a wearing surface or for trowel applied patching, mix to a stiffer consistency (using less than the full container of mixing liquid) and install to a minimum thickness of 3/8" (0.95 cm) and a maximum of 1 inch (2.54cm). When extending with pea gravel, the maximum application depth is 3" (7.62 cm) per lift. Use multiple lifts to patch deeper depths. A recessed edge outlining the area to be repaired is recommended on any areas carrying vehicular or forklift traffic. For horizontal applications, SpeccoTop 111 must be scrubbed into the substrate, filling all pores and voids After filling repair, apply sufficient pressure to fill surface holes and voids and to ensure maximum bond to the substrate. Screed the mortar and allow to set to desired stiffness, then finish with wood or sponge float for a smooth surface or broom or burlap-drag for a rough finish. Lubricate the trowel and other tools with the remaining component B liquid to prevent dragging. Do not featheredge when using as a wearing surface. Final set is typically around 1.0 to 1.5 hours (+/-) 30 minutes depending on thickness and weather conditions. Clean tools and equipment with water before Speccrete SpeccoTop 111 hardens, as hardened material will require mechanical abrasion for removal. **CURING:** As per ACI recommendations, curing is required for portland cement based products. Moist cure with a fine mist of water if the surface is to receive additional treatments, or use a compatible curing compound such as Specco Envirocure 1315. Note that curing compounds can adversely affect adhesion of following layers of mortar. Moist curing should commence immediately after finishing. Protect newly applied material from direct sunlight, wind, rain or frost. The use of solvent based curing compounds are not recommended.

CAUTIONS: Do not apply Speccrete® SpeccoTop 111 over hard troweled or tightly finished floors without first scarifying or abrading to a fractured profile of (+/-) 1/16 inch for optimum adhesion. Do not apply as a "skim coat" over large areas. Do not mix more material than can be placed in 30 minutes. Do not over-trowel the material as this can weaken the surface. The temperature of the mixed material should ideally be between 45° F to 70° F, do not apply below 45°F or above 90°F. Extension aggregates should be non-reactive (no limestone), clean, well graded, have low absorption and high density, and comply with ASTM C33 size number 8 per Table 2. The liquid to powder ratio is critical, do not vary the specified water amount or over water. Do not re-temper. As with any cement based material, avoid contact with aluminum to avoid adverse chemical reaction and possible product failure. Use of any extension aggregates will alter physical properties as listed. Protect from excessive sun, low humidity, rain and wind exposure, as well as temperature extremes that could prevent inadequate curing. High humidity and lower temperatures will slow rate of strength gain. Do not apply if rain is expected within 24 hours of application. Do not apply to frozen, frost filled or hot surfaces. **WARNINGS:** Contains cement and silica, avoid inhalation of dust. Wear gloves, safety goggles, and OSHA approved dust respirator during mixing and placement. Refer to product M.S.D.S. (Material Safety Data Sheet) for additional safety information. Do not take internally. Avoid prolonged contact with skin. **FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. NPCS HMIS SAFETY RATINGS:** HEALTH = 2, FLAMMABILITY = 0, REACTIVITY = 0, PROTECTION = E **SHELF LIFE:** 1 year properly stored

PACKAGING: 55 lb. (25 kg) bag with 1 gallon bottle of bonder

STORAGE: 40°F to 90°F-Keep from Freezing

LIMITED WARRANTY: This product is warranted to be of merchantable quality when used according to the instruction herein. It is not warranted to be suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of the product as purchased, if found to be defective upon inspection by the manufacturer. This limited warranty is issued and accepted in lieu of all other expressed warranties and explicitly excludes liability for consequential damages. Buyer assumes all risk and liability resulting from the use of this product. Revised – 10-07-09