

## SPECCKRETE® HIGHWAY REPAIR 928 RAPID SETTING-CHLORIDE FREE REPAIR MORTAR

**PRODUCT DESCRIPTION:** Speccrete® Highway Repair 928 is a specially formulated, single component, very rapid hardening, early strength gaining, cement based concrete patching mortar. Speccrete® Highway Repair 928 may be used above or below grade on horizontal concrete surfaces. Speccrete® Highway Repair 928 is used to repair highways, bridge decks, industrial floors, ramps, loading docks, parking garage decks and driveways. Speccrete® Highway Repair 928 may be used for applications under constant moisture contact. Speccrete® Highway Repair 928 contains non-chloride accelerators and can be used in cold weather or sub freezing applications down to 0°F if necessary.

**BENEFITS:** IDEAL FOR COLD WEATHER APPLICATIONS...FAST SETTING...VERY RAPID HIGH EARLY STRENGTH FORMATION...MINIMAL SUBSTRATE DOWNTIME...NON-SHRINK...TENACIOUS BOND...RESISTANT TO FREEZE THAW & DEICING CHEMICALS...OPEN TO FOOT TRAFFIC IN 2 HOURS, VEHICLE TRAFFIC IN 3 HOURS...MAY BE TOP COATED IN AS LITTLE AS FOUR HOURS

**COMPOSITION:** Cement, plasticizers, silica fume and selected aggregates. This product contains no added chlorides that contribute to reinforcement steel corrosion, and contains no gypsum-based components.

**TECHNICAL DATA:** Complies with ASTM C-928 Class R3 Specifications for Packaged, Dry, Very Rapid Hardening Cementitious Materials.

<b>WORKING &amp; PERFORMANCE PROPERTIES @ 70° F (21° C) (APPROXIMATE):</b>	
<b>Yield per 50 lb. Bag:</b>	0.44 cubic feet
<b>Coverage per 50 lb. Bag:</b>	22 square feet at ¼ inch thickness
<b>Minimum / Maximum Thickness Application:</b>	0.5 inch (neat) / 6 inches (extended with pea gravel)
<b>Initial Set per ASTM C-403:</b>	30 Minutes
<b>Final Set per ASTM C-403:</b>	40 Minutes

TEST METHOD:	ASTM C-109	ASTM C-882	ASTM C-78	ASTM C-496
TYPE OF TEST:	COMPRESSIVE STRENGTH:	SLANT SHEAR BOND STRENGTH:	FLEXURAL STRENGTH:	SPLITTING TENSILE STRENGTH:
<b>AGE OF SAMPLE:</b>	-	-	-	-
<b>1 HOUR:</b>	6380 p.s.i.	-	-	-
<b>3 HOURS:</b>	8230 p.s.i.	-	-	-
<b>1 DAY:</b>	9310 p.s.i.	1080 p.s.i.	290 p.s.i.	350 p.s.i.
<b>7 DAY:</b>	10800 p.s.i.	1820 p.s.i.	610 p.s.i.	860 p.s.i.
<b>28 DAY:</b>	11830 p.s.i.	2980 p.s.i.	810 p.s.i.	900 p.s.i.

<b>Flow of Mortar at 5 minutes per ASTM C-109:</b>	128 %
<b>Slump per ASTM C-143:</b>	11.0
<b>Scaling resistance per ASTM C-672 @ 25 cycles:</b>	Visual Rating = 1 Very slight
<b>Air Cured Length Change % @ 28 days per ASTM C-157:</b>	0.016
<b>Water Cured Length Change % @ 28 days per ASTM C-157:</b>	-0.014
<b>Chloride Content per AASHTO-T260 Procedure C:</b>	235 ppm (0.9 lbs/yd <sup>3</sup> ) 300 ppm is max allowed

\*All tests above were run at 12.4 % water to powder ratio (6.20 lbs. water / 50.0 lbs. powder)

**DIRECTIONS FOR USE:** All areas to be patched shall be clean and free of oil, grease, dirt, deteriorated concrete and all contaminants. Saw-cut and slightly undercut the edges of the area to be patched to

**DIRECTIONS FOR USE (Continued):** accommodate the repair to a ½ inch (12.5 mm) minimum. Completely expose all reinforcing steel, ensuring a minimum clearance of ¾ inch behind the steel. Clean and prime any exposed steel and reinforcing according to ICRI guidelines No. 03730. Abrade or acid etch slick surfaces to ensure proper bond. Pre-wet the prepared area with potable water before applying Speccrete® Highway Repair 928. Any excess water should be blown or swept away to prevent dilution of the patching material.

Speccrete® Highway Repair 928 will require 2.40 to 3.00 quarts of potable water per 50# bag to achieve the proper mix consistency. Add the proper amount of Speccrete® Highway Repair 928 to the pre-measured amount of clean water and mix to a stiff plastic like consistency for no more than four minutes. Mix small quantities of Speccrete® Highway Repair 928 in a clean container with a hand trowel or in a wheelbarrow with a mud hoe. Use a rotary mixer for mixing larger quantities, up to 90 lbs. In deep areas over 2 inches in depth, Speccrete® Highway Repair 928 should be extended with clean, washed 3/8" pea gravel in the range of 13 to 26 pounds (1-2 gallons by volume) per 50 lb. bag. If adding dry pea gravel, additional water should be added at a rate of 0.4 gallon per gallon of aggregate. If adding pre-wet or damp gravel, then no additional water should be added.

Place Speccrete® Highway Repair 928 immediately after mixing. Force or scrub Speccrete® Highway Repair 928 firmly into the area to be patched by hand or with a trowel, making sure to fill all pores and voids. Compact thoroughly to ensure bond. After initial set, finish Speccrete® Highway Repair 928 with a steel trowel until smooth and level with the surrounding surface. Do not overwork the material. As per ACI recommendations, cure Speccrete® Highway Repair 928 with damp cure method, wet burlap, or application of a curing compound meeting ASTM C-1315 such as Specco Envirocure 1315. Curing is mandatory, especially in hot weather, direct sunlight and for thin patches, and should commence immediately after finishing.

**CAUTIONS:** Mix Speccrete® Highway Repair 928 mortar to a homogenous, lump-free consistency at least 3-5 minutes. Do not mix more material than can be placed in 10 minutes. Use only potable water for mixing. Do not over water. Do not re-temper. Do not feather edge. Do not apply less than ½ inch (neat) or over 6 inches (extended with pea gravel) in thickness per lift. Clean mixing equipment between batches. Protect from excessive sun, low humidity, rain and wind exposure, as well as temperature extremes that could prevent inadequate curing. For temperatures below 32° F (0° C) use the minimum amount of water stated above (10% w/p or 2.4 quarts / 50 lb bag) for improved strength and set properties. Use warm water and heated aggregates to keep the repaired area temperature above 60° F (16° C) if possible. Refer to ACI 306.1 report "Standard Specification for Cold Weather Concreting" for recommended protection methods of concrete placement in sub-freezing temperatures. Do not apply to frozen, frost filled surfaces. Colder temperatures will extend open time and reduce rate of strength gain. Do not add calcium chloride, bonding agents, or other admixtures to Speccrete® Highway Repair. Use of any extension aggregates will alter physical properties.

**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.

**STORAGE / SHELF LIFE:** 40° to 90° F / 1 year properly stored in dry, cool area

**PACKAGING:** 50 lb. (22.72 kg) bags

**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 – 11-06-09