



# SPECCRETE® HIGHWAY REPAIR 928

## RAPID HARDENING CEMENTITIOUS REPAIR MORTAR

**PRODUCT DESCRIPTION:** *Speccrete® Highway Repair 928* is a specially formulated, single component, 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 or specifically for applications under constant moisture contact. *Speccrete® Highway Repair 928* is ideal for various patching repairs to highways, bridge decks, industrial floors, ramps, loading docks, parking garage decks and **driveways**. *Speccrete® Highway Repair 928* is polymer modified for improved bond strengths, and also contains active corrosion inhibiting additives to help protect long term durability of reinforcement steel.

**BENEFITS:**

- Meets ASTM C928 Type R3 Mortar Specifications
- Pourable consistency is ideal for horizontal patching repairs
- Fast setting, non-shrink formulation with very rapid high early strength gain formation
- Minimal substrate downtime, open to foot traffic in 2 hours and vehicle traffic in 3 hours
- Top coats may be applied in as little as 4 hours
- Resistant to freeze thaw and deicing chemicals

**LEED CREDIT CONSIDERATIONS:** Materials and Resources: **MR Credits 5.2:** Regional materials- Greater than 20% extracted, processed & manufactured regionally at production location: Lemont, Il. 60439. 90% Content- Harvested within 500 miles.

**COMPOSITION:** Cement, plasticizers, silica fume, polymers, rust inhibitors 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, Rapid Hardening Cementitious Materials.

WORKING & PERFORMANCE PROPERTIES @ 70° F (21° C) (APPROXIMATE):	
Yield per 50 lb. Bag:	0.46 cubic feet
Coverage per 50 lb. Bag:	22 square feet at ¼ inch thickness
Minimum / Maximum Thickness Application:	0.5 inch (neat) / 8 inches (extended with pea gravel)
Initial Set per ASTM C-191:	21 Minutes
Final Set per ASTM C-191:	32 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:
AGE OF SAMPLE:	-	-	-	-
3 HOURS:	3760 p.s.i. (3000 min.)	-	-	-
1 DAY:	5570 p.s.i. (5000 min.)	2480 p.s.i. (1000 min.)	600 p.s.i.	350 p.s.i.
7 DAY:	6750 p.s.i. (5000 min.)	2720 p.s.i. (1500 min.)	730 p.s.i.	860 p.s.i.
28 DAY:	7170 p.s.i. (>5000 min.)	2980 p.s.i.	920 p.s.i.	900 p.s.i.

Flow of Mortar at 5 minutes per ASTM C-1437:	Initial 100%, 5 minutes = 100% (spec.= 100%)
Scaling resistance per ASTM C-672 @ 25 cycles:	Concrete Visual Rating: 1.00 (spec < 2.50) Mortar Scaled Material: 0.01 lb./ft2 (spec. <1.00 lb./ft2)
Water Cured Length Change % @ 28 days per ASTM C-157:	+ 0.006 (spec. +0.150 maximum)
Air Cured Length Change % @ 28 days per ASTM C-157:	-0.053 (spec.= <-0.150 maximum)
Chloride Content per ASTM C1218:	(0.11 lbs./yd3) (spec.< 0.40 lb./ yd3 maximum)

\*All tests above were run at 13.76 % water to powder ratio (6.88 lbs. water (3.30 quarts / 50.00 lbs. powder)

**DIRECTIONS FOR USE: SURFACE PREPARATION:** All areas to be patched shall be clean and free of oil, grease, dirt, deteriorated concrete and any contaminates. Saw-cut and slightly undercut the edges of the area to be patched to accommodate the repair to a 3/4 inch (19 mm) minimum. Completely expose all reinforcing steel, ensuring a minimum clearance of 3/4 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.



**DIRECTIONS FOR USE: SURFACE PREPARATION (Continued):** 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.

**MIXING:** **Speccrete® Highway Repair 928** will require 3.30 quarts of potable water per 50# bag to achieve the proper mix consistency. Add the proper amount of powder to the pre-measured amount of clean water and mix to a stiff plastic like consistency for no more than five minutes. Mechanically mix small 50 lb. bag quantities of **Speccrete® Highway Repair 928** in a clean bucket with a half inch power drill using a Jiffy mixer paddle at medium speed or mix manually by use of a wheelbarrow with a mud hoe. For larger pours, use a rotary mortar mixer for mixing quantities typically up to 3-4 bags (150-200 lb.). 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.

**APPLICATION:** 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.

**CURING:** 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's Envirocure 1315**. Curing is mandatory in hot weather, direct sunlight and for thin patches, and should commence immediately after finishing. In cold conditions, do not apply any film forming curing compounds when surface temperatures are expected to fall below 40 °F (4 °C) within 4 hours of the completed application.

**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 1/2 inch (neat) or over 8 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. Refer to ACI 306.1 report "Standard Specification for Cold Weather Concreting" for recommended protection methods of concrete placement in colder temperatures. Use warm water and heated aggregates to keep the repaired area temperature above 60° F (16° C) if possible. 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 928**. Use of any extension aggregates will alter physical properties.

**GHS HAZARD RATINGS: DANGER:**



**Irritant-Respiratory Tract Irritation.**



**Health Hazard: Known carcinogen**



**Health Hazard: Corrosive Material**

**WARNINGS: HEALTH HAZARD & IRRITANT:** This product contains both Portland cement & crystalline silica (a known carcinogen). It is established that prolonged breathing of crystalline silica dust over time will increase the risk of serious lung disease (Silicosis). Refer to product S.D.S. (SAFETY DATA SHEET) for FIRST AID INFORMATION, or any related health and safety information before using this product. For medical emergencies only, call INFOTRAC @ 800-535-5053.

**FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.** Avoid Inhalation of these dusts and any prolonged, direct contact with skin. Wear chemical resistant gloves, safety goggles, and O.S.H.A. /N.I.O.S.H. approved respirator during mixing and placement. Keep away from food and drink. Wash hands thoroughly after use and before eating. Do not take internally. **NPCS HMIS SAFETY RATINGS:** HEALTH = 2, FLAMMABILITY = 0, REACTIVITY = 0, PROTECTION = E

**STORAGE / SHELF LIFE:** 40° to 90° F / 1 year properly stored in dry, cool area. **PACKAGING:** 50 lb. (22.72 kg) bags

**WARRANTY:** Specco Industries, Inc. (Specco) solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. No other representations or statements made by Specco representatives, in writing or orally, shall alter this warranty. Specco MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. **Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages.** Specco explicitly excludes any written or oral statements or implied warranty on the performance of an applied/installed product manufactured or sold by Specco or through a Specco authorized distributor or reseller. Specco has no control over adherence to Specco's application standards, site conditions, atmospheric variations, installer/applicator skill level or the determination of the suitability of any Specco products for a specific intended purpose. Buyer shall be solely responsible for determining the suitability of Specco's products for the Buyer's intended purposes.

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