

# SPECCRETE® SPECCOROCK-SLM

## FLOWABLE, SHRINKAGE COMPENSATED CONCRETE GROUT

**PRODUCT DESCRIPTION:** Speccrete® Speccorock SLM is a specially formulated, highly fluid; cement based concrete grouting material that requires only the addition of potable water for mixing. Speccrete® Speccorock SLM is recommended for reinstatement of beams, columns, or other large structural concrete sections that cannot be repaired with traditional trowel applied mortars. Speccrete® Speccorock SLM exhibits high fluidity and compaction and is ideal for form and pour applications which are hard to access or vibrate. Speccrete® Speccorock SLM contains selected aggregates and additives to allow easier pumpability, no segregation, reduced water requirement, and controlled expansion in both plastic and hardened states.

**BENEFITS:** SHRINKAGE COMPENSATED...PUMPABLE ...FAST EARLY STRENGTH GAIN FOR REDUCED FORM CYCLE TIME AND PLACEMENT COSTS ...TENACIOUS BOND... RESISTANT TO FREEZE THAW

**COMPOSITION:** Cement, plasticizers, rheology modifiers and selected aggregates. This product contains no calcium chloride or intentionally added chlorides that contribute to reinforcement steel corrosion.

**TECHNICAL DATA:**

WORKING & PERFORMANCE PROPERTIES @ 70° F (21° C) (APPROXIMATE)	
Yield per 50 lb. Bag:	0.40 cubic feet
Initial Set per ASTM C-191:	1 hour
Final Set per ASTM C-191:	2 hour
Fresh Wet Density per ASTM C138:	134 lbs./ft3

COMPRESSIVE STRENGTH PER ASTM C-109 MODIFIED PER ASTM C-1107. MIX MADE WITH TYPICAL 10 LB (20%) ADDITION OF 3/8 INCH PEA GRAVEL / 50 LB BAG SPECCRETE SLM	
<b>AGE OF SAMPLE:</b>	
<b>3 HOURS</b>	4525 p.s.i.
<b>1 DAY:</b>	6200 p.s.i.
<b>7 DAY:</b>	8900 p.s.i.
<b>28 DAY:</b>	10,100 p.s.i.

\*All tests above run in house at “pumpable consistency” = 10.56 % water to powder ratio = 6.86 lbs. (3.27 quarts) water / 60.00 lbs. Speccorock SLM / pea gravel blend noted above/ \*\* No bonding agent used.

**DIRECTIONS FOR USE**

**SURFACE PREPARATION OF CONCRETE:** Saw cut or undercut the edges of the area to be repaired to accommodate the material to a minimum depth of 1/2 " (12 mm) to avoid feather edging and to provide a square edge. Break out the complete repair area to a minimum depth of 1 1/2 " (38 mm) up to the sawn edges, across the entire area of the repair or reinstatement. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or abrasive blasting. All areas to be repaired shall be clean and free of oil, grease, dirt, algae, paint, corrosion deposits; related surface contaminants and deteriorated concrete. A pull off test is recommended when decontamination of the surface is completed.

**SURFACE PREPARATION OF STEEL:** All embedded steel in the repair area should be fully exposed. All scaling, corrosion deposits, and loose concrete should be removed as well. Steel should be cleaned to a SSPC-SP10 near White Metal Specification condition using abrasive blasting methods. SSPC-SP2 or SSPC-SP3 specifications can be used if alternate Hand Tool Cleaning or Power Tool Cleaning methods are substituted respectively. Corrosion related contaminants from chloride exposure should be removed by high pressure washer with either steam or water modified with an approved corrosion inhibitor immediately after abrasive blasting. Reinforcement which is badly corroded or missing may require replacement per Concrete Reinforcing Steel Institute (CRSI) or American Welding Society (AWS) fastening specifications. **APPLICATION INSTRUCTIONS-FORMWORK:** Refer to ACI 347R-88 for Recommended Practice for Concrete Formwork. All formwork should be rigid and tight to prevent loss of material. Form faces should be sealed to prevent water from being absorbed out of the repair material. The formwork should include drainage outlets for presoaking, and possibly air venting outlets if the area is below a soffit. Suitable access points to pour or pump the mixed material should be selected. Form design should allow for a minimum of 3/4 inch (19mm) to cover all steel. Apply a form release agent to the form faces to allow easier removal after the pour is completed.

**REINFORCEMENT PRIMING:** The use of an approved Zinc-rich epoxy or urethane primer should be applied to all steel reinforcement to achieve an unbroken film. Allow the primer to dry before continuing. **SUBSTRATE PRIMING:** Before placement of Speccrete® Speccorock SLM, all prepared concrete substrates in the repair area should be pre-dampened to a SSD (saturated surface dry) condition. This should be done several hours prior to product application by filling the formwork with clean water, and then draining the water through the outlets immediately before placement commences. The drainage outlets should then be plugged or sealed and there should be no ponding water remaining. In jobsite circumstances where the formwork cannot be filled with water, the prepared concrete substrates should be thoroughly hosed down with clean water to achieve adequate saturation. The substrate should again be in a SSD (saturated surface dry) condition prior to placement.

**MIXING:** A rotary paddle type mixer for larger jobs or a spiral paddle drill type at a slow speed (400/500 rpm) for smaller jobs are both acceptable mixing methods. Speccrete® Speccorock SLM will require approximately 3.1 to 3.3 quarts (2.9-3.1 liters) of potable water per 50 lb. bag combined with 8-10 lb added 3/8 inch pea gravel to achieve the proper mix consistency. Pour approximately 3/4 of this amount into the mixer, and with the paddle rotating, add one full 50lb. (22.7kg) bag of Speccrete® Speccorock SLM, and mix for one minute before adding the rest of the water. Mix for an additional 2-3 minutes until a smooth and uniform consistency is obtained. Always add the powder to the liquid. If using a drill paddle type mixer, pour all of the water into a minimum 15 gallon size container, add the full bag of powder with the paddle drill rotating, and mix for 2-3 minutes until the mix is of smooth consistency. The quantities mixed may be scaled up as needed to ensure that the mixing and placing operation is continuous. In temperatures below 45° F (7° C), the use of warm water (up to 86° F (30° C) is recommended to accelerate strength development. In temperatures above 95° F (35° C), the material should be stored in the shade and cool water used for mixing.

**PLACING:** The mixed material should be placed within 20-25 minutes of mixing at ambient temperatures in order to maximize the fluidity potential and the expansion process. If placing by pump, standard concrete pumping practice should be followed. Speccrete SLM is designed for continuous pumping and the pump should not be left idle with material in the hose to avoid possible plugging. Refer to ACI 304 R-85 Placing Concrete by Pumping Methods. All tools, equipment, and mixers should be thoroughly cleaned with water immediately after use. Clean mixing equipment between batches. Cured material can only be removed mechanically. **CURING:** The formwork should remain in place until the compressive strength of the Speccrete® Speccorock SLM has achieved 1450 psi (10Mpa) or as otherwise specified by the engineer. Since Speccrete® Speccorock SLM is a cementitious based material, curing must take place immediately after the formwork is stripped in accordance with good concrete practice. Refer to ACI 308-81 Standard Practice for Curing Concrete. Immediately after striking the formwork, all exposed faces of the repair should be thoroughly soaked with clean water and then sprayed with a water base liquid curing membrane such as Envirocure 1315. In fast drying conditions, supplementary curing may be required such as polyethylene sheeting, which should be tightly fixed over the repair area and taped down to prevent any air movement between the two surfaces.

**CAUTIONS:** Do not mix partial bags. The product should not be used to reinstate horizontal areas where the surface would remain unrestrained during cure. The material should not be exposed to running water during application. Do not mix more material than can be placed in 20 minutes. Use only potable water for mixing. When mixing Speccrete® Speccorock SLM, the water-to-powder ratio is very critical, do not vary the specified water amount or over water. Protect from excessive sun, low humidity, rain and wind exposure, as well as temperature extremes that could prevent inadequate curing. Speccrete® Speccorock SLM should not be used when the substrate and/or air temperature is below 45° F (7° C) and falling. 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 or other accelerator type admixtures to Speccrete® Speccorock SLM.

**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, P. PROTECTION = E

**PACKAGING:** 50 lb. bags **STORAGE:** 40° F (4.4° C) to 90° F (32.2° C) in a dry environment **SHELF LIFE:** 1 year

**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 – 06-08