

# **SPECCRETE® SPEED REPAIR UW**

## QUICK SETTING UNDER WATER GRADE CONCRETE PATCHING MORTAR

**SPECCRETE® SPEED REPAIR UW** is a general-purpose cement-based patching mortar for concrete and masonry that requires only the addition of potable water for mixing. **SPECCRETE® SPEED REPAIR UW** can be shaved to level the repair back to uniform condition and exhibits high compressive and bond strengths, along with good weathering properties. Recommended uses are for repairs where contact with water or moisture is present or expected such as concrete piers, concrete piling, concrete pipe, tunnels, or manhole applications.

#### **BENEFITS:**

- > CAN BE USED TO STOP ACTIVE LEAKS.
- > MORE ECONOMICAL THAN COMPARABLE HYDRAULIC CEMENTS.
- > 28 DAY COMPRESSIVE STRENGTHS IN EXCESS OF 5000 PSI.
- > CAN BE SHAPED OR FORMED EASILY.
- > LIGHT GRAY COLOR FOR MORE UNIFORM MATCH TO SUBSTRATE.
- > NON-SHRINK.

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

**COMPOSITION:** Proprietary blend of cement, water reducers, rheology modifying additives and selected aggregates for improved finishing and carving. This product contains no calcium chloride or intentionally added chlorides that contribute to reinforcement steel corrosion.

#### **TECHNICAL DATA:**

WORKING AND PERFORMANCE PROPERTIES @ 70º F (21º C) APPROXIMATE VALUES *	
Initial set per ASTM C-191 (Finishing time):	3-5 minutes
Final set per ASTM C191:	18-20 minutes
Coverage per 45 LB bag:	22 square feet at 1/4 inch thickness
Yield per 45 LB bag:	0.45 cubic feet
Compressive Strength per ASTM C-109: 24 hour	3500 psi
Compressive Strength per ASTM C-109: 7 day	5450 psi
Compressive Strength per ASTM C-109: 28 day	6120 psi
Tensile Strength per ASTM C- 190: 7 day	310 psi
Tensile Strength per ASTM C- 190: 28 day	415 psi
Flexural Strength per ASTM C-78: 28 day	970 psi
Freeze Thaw Durability per ASTM C-666: 310 cycles	96.70%
Shrinkage 50% RH per ASTM C-157: 28 day	-0.160%
Expansion 100% RH per ASTM C-157: 28 day	0.105%
Scaling Resistance per ASTM C-672: 25 cycles	0% Loss
Chloride content per ASTM D-1411:	<0.01%

\*Above results obtained using a water / powder ratio of 22.40% = 1.21 gallon water (4.85 quarts) per 45 lb. (20.45 kg) unit

**SURFACE PREPARATION: CONCRETE:** Existing concrete should be prepared by removing unsound areas with the use of high pressure water blasting, grinding, sandblasting or by use of chemical cleaning and etching. Remove all dirt, grease, oil and other contaminants that may come in contact with the patching material. For <u>horizontal patching</u>, a 3/4 inch minimum saw cut is recommended to insure adhesion. Always pre-wet the substrate to a saturated surface dry (S.S.D.) condition with no standing water on the surface.







**MIXING:** Mix only as much material as can be placed in 2-3 minutes. Always add the powder to the water. Mix **SPECCRETE® SPEED REPAIR UW** to a uniform, lump free consistency for a minimum of 60 seconds. A thick, creamy putty-like texture (zero slump) is considered ideal working consistency. can be mixed with a margin trowel for small repairs. For bag mixing, place approx. 1.21 gallon (4.85 quarts) of **SPECCRETE SPEED REPAIR UW** water in the mixing container and slowly add the 45 lb. of **SPECCRETE® SPEED REPAIR UW** while continuously mixing with a mechanical low speed drill and paddle mixer. Larger quantities may be mixed in a mortar mixer if necessary to speed mixing process. Do not add previously mixed material to new batches. Do not re-temper or add additional water to previously mixed material to gain plasticity.

**APPLICATION:** Apply **SPECCRETE® SPEED REPAIR UW** between 1/4 inch minimum to 2 inch maximum thickness. Always overfill the area to be patched. Force **SPECCRETE® SPEED REPAIR UW** into the area to be patched by trowel and mold to the desired shape. Once initial set has occurred, shave the patch to the desired finish. Always shave towards the bond lines. Finish with a steel trowel. Underwater patching is typically done by hand packing and finishing method. If applying in successive lifts, allow preceding lift to stiffen to a hardened consistency before applying fresh material. Set times will vary depending on temperature, humidity, and thickness. Clean tools with water immediately after use. Please contact **SPECCO technical service** for conditions not specified or application procedures not noted, at 800-441-6646.

**CURING:** Cure **SPECCRETE® SPEED REPAIR UW** with damp cure method if any surface treatment is to be used, or with a quality cure and seal compound such as **Envirocure 1315.** Curing should be considered mandatory, especially in hot, windy weather, direct sunlight and for thin patches.

CAUTIONS: When mixing the SPECCRETE® SPEED REPAIR UW, the water to powder ratio is very critical, do not vary the specified water amount or over water. Minimum application thickness of SPECCRETE® SPEED REPAIR UW is 3/4 inch (18 mm) for horizontal, and 1/4 inch (6 mm) for vertical or overhead. Do not feather edge. For featheredge or very fine repairs, the use of SPECCRETE® Thin Repair is recommended. Maximum recommended application thickness in one lift is 2 inches (50 mm). Do not re-temper the mixed material. Do not overwork the completed surface. Protect from excessive sun, low humidity, rain, or wind exposure, as well as temperature extremes that could prevent inadequate curing. Do not apply SPECCRETE® SPEED REPAIR UW if the temperature is expected to fall below 40° F (4° C) or rise above 90° F (32.2° C) within 24 hours of application. Do not apply to frozen or frost filled surfaces. Heating the patch area until warm, using warm water for mixing and insulating the patch after application will assist in reaching higher strength development. Do not use direct heat on the patch after its installation. Colder temperatures will extend open time and reduce rate of strength gain. Do not add calcium chloride or other accelerator type admixtures to SPECCRETE® SPEED REPAIR UW. The use of SPECCRETE® G-30, SPECCRETE® Highway Repair 928, or SPECCRETE® Phast Patch products are recommended for cold weather patching options.

### **GHS HAZARD RATINGS: DANGER:**







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.



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#### NPCS HMIS SAFETY RATINGS: HEALTH = 2, FLAMMABILITY = 0, REACTIVITY = 0, PROTECTION = E

PACKAGING: 45 lb. (20.45 kg) bags or pails

**STORAGE:** 40°F to 90°F in a dry, climate protected warehouse.

SHELF LIFE: 1 year properly stored

#### FREIGHT CLASS: Item #42130, Sub 0, Freight Class 50 -Cement base patching material in bags

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