



REMR MATERIAL DATA SHEET CM-PC-1.11
 CONCRETE PATCHING MATERIAL: SPEED® CRETE

1. NAME

SPEED® CRETE

Final set (underwater)	30 min
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2. MANUFACTURER

Tamms
 1222 Ardmore Ave.
 Itasca, IL 60143
 Telephone: 312-773-2350
 Telex: TAMMS IND ITAS 910 651 2165

Compressive strength, psi	
24 hr	2,000
28 days	5,000

Volume change	
Moist condition	slight expansion
Air-dry condition	slight shrinkage

Density	100 lb/cu ft
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Percent of calcium chloride	None
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Heat of hydration	Unnoticeable
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3. DESCRIPTION

The fast-setting high-strength concrete, SPEED® CRETE, is a complete, ready-to-use concrete patching compound that is unequalled for fast permanent repairs.

6. MANUFACTURER'S GUIDANCE FOR APPLICATION

Surface preparation: Remove all loose, scaly, oily material, marine growth, deteriorated wood and rust scale.

4. USES & LIMITATIONS

Uses: Blue Line is a special underwater formula for restoration of pilings, seawalls, sewers, water mains, dams, bridges, etc. It eliminates the need to drain or pump out underwater areas to be repaired. It can be used for some out-of-water applications. It bonds to clean concrete, stone and masonry. It adheres well to steel and in some cases bonds to wood.

Limitations: SPEED® CRETE is not usually recommended for applications less than 1/2 in.

Mixing: A typical mixture is in the ratio of about 5-1/2 qt of water to 50 lb of SPEED® CRETE. Mix the SPEED® CRETE and water thoroughly, for not more than 1 min, to the consistency of putty with no slump. Do not retemper. Use clean fresh or sea water. Do not use any liquid other than water when mixing SPEED® CRETE. If the concrete is mixed in a rotary mixer, use a small mixer with rubber tipped paddles. Pour the required amount of water into the mixer, then add SPEED® CRETE. Mix no more than 100 lb at a time. Clean mixing equipment between batches. If mixed by hand, small amounts of SPEED® CRETE such as 5 to 10 lb, can be readily mixed in a bucket. For larger amounts use a wheelbarrow or bin.

5. MANUFACTURER'S TECHNICAL DATA

Physical properties:

Initial set	3 to 5 min
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Placement: Place the SPEED® CRETE in a firm manner to assure complete bond to all areas being covered. SPEED® CRETE can be applied by trowel or hand methods and no forms are required.

Finishing: Out-of-water applications can be finished to a smooth, even surface by hand troweling. SPEED® CRETE

used underwater is best finished by hand.

Curing: For out-of-water use, no other finishing chemicals or methods shall be required other than standard curing compounds. We recommend SC Seal Cure as an excellent curing compound.

Color: Concrete gray.

7. CORPS OF ENGINEERS' EVALUATION

This material was evaluated by Singleton Laboratories, TVA, through a support agreement with US Army Engineer Waterways Experiment Station.*

<u>Property</u>	<u>Test Method</u>	<u>Results</u>
Compressive strength, psi	ASTM C 109	5,150
Slant-shear bond strength, psi	ASTM C 882	
Dry surfaces		970
Wet surfaces		1,240
Bond capacity in direct tension, psi	**	645
Bond capacity under flexural stress, psi	ASTM C 293	1,040
Underwater abrasion loss, %	CRD-C 63	20
Resistance to cycles of freezing and thawing, % of original weight after 312 cycles	ASTM C 666 Procedure A	49
Impact resistance, in.-lb	--	198
Coefficient of thermal expansion, millionths/°F	--	2.4

* Best, Floyd J., and McDonald, James E. 1990. "Spall Repair of Wet Concrete Surfaces," Technical Report REMR-CS-25, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

** Causey, F. E. 1984. "Preliminary Evaluation of a Tension Test for Concrete Repairs," Report Gr-83-14, Department of the Interior, Bureau of Reclamation.

8. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of activities involving potentially hazardous and toxic chemical substances. Manufacturer's recommendations to protect occupational health and environmental quality should be carefully followed. Material safety

data sheets should be obtained from the manufacturers of such materials. In cases where the effects of a chemical substance on occupational health or environmental quality are unknown, chemical substances should be treated as potentially hazardous toxic materials.

9. AVAILABILITY AND COST

SPEED® CRETE is available from the manufacturer in 50-lb pails at a cost of approximately \$18 plus shipping.