3 Contributes LEED Points

PROSPEC®

RCT Rapid Cure Technology

BLENDCRETE

Description

ProSpec® BlendCrete is a one component, polymer modified, cement based concrete and masonry patching compound.

Features

- Fast setting, low slump repair mortar that can be trowelled, shaped and shaved after taking an initial set
- Easy shaping and molding
- One component incorporating water activated polymer system
- Integrated corrosion inhibitor
- Can be applied overhead and vertically without using expensive forming procedures
- Apply from 1/2" to 1" (13 to 25 mm)
- Tenacious bond to substrates
- Interior/exterior
- Portland cement based
- Normal set time of 30 minutes; also available in 15 minute set time
- Available in 3 gray colors and one white color
- Rapid Cure Technology (RCT)™

Uses

- Used interior or exterior, above or below grade, on vertical, overhead and horizontal surfaces
- Suited for patching distressed horizontal, vertical and overhead surfaces including precast products, concrete pipe, curbs, sidewalks, bridges, panels and walls
- Used to fill honeycombs, form high rise holes, spalls or irregularities due to misaligned forms or unconsolidated concrete

Technical Data

Working Time	
15 minutes at 70º F (21º C)	
Set Time ASTM C 191 @ 70º F (21º C)	
Initial set	Approx. 20 min.
Final set	Approx. 30 min.
Compressive Strength ASTM C 928	
3 hours	3,000 psi (20.7 MPa)
1 day	4,000 psi (27.6 MPa)
7 days	5,000 psi (34.5 MPa)
28 days	5,500 psi (37.9 MPa)

Freeze/Thaw Resistance ASTM C 666 Method “B”	
After 300 cycles	1% loss due to slight scaling; no spalling

Average Scaling Resistance (ASTM C 672-98)		
No. of cycles	Rating	Condition of surface
25	0	No scaling visible

Shear Bond Strength ASTM C 882	
1 day	1,035 psi (7.1 MPa)
7 days	1,650 psi (11.4 MPa)
Flexural Strength ASTM C 348	
1 day	1,142 psi (7.9 MPa)
28 days	1,180 psi (8.1 MPa)

Tested at 5 quarts of water. Results obtained under controlled laboratory conditions. Reasonable variations can occur due to atmospheric and job site conditions. Conforms to Modified ASTM C 928 R2

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Preparation

Adjoining surfaces must be sound, clean, free of loose or damaged concrete, dust, dirt and other contaminants that will interfere with bond. Completely expose and clean all reinforcing steel, ensuring a minimum clearance of 3/4" (19 mm) behind reinforcing steel.

Perform reinforcing steel preparation in accordance with ICRI Technical Guidelines No. 03730. For best results patch area edges should be saw cut to a depth of 1/2" (13 mm). Abrade concrete to obtain a rough surface promoting adhesion. The area should be saturated surface dry (SSD) with no standing water on the surface. The use of a vigorously scrubbed application of a no slump bond coat of BlendCrete or a bonding agent like ProSpec Acrylic Additive is recommended. This should be applied to all surfaces coming into contact with the patch. Do not allow bond coat to dry prior to the placement of the BlendCrete.

Refer to

- ICRI Guide No. 03732 Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays

Mixing

BlendCrete requires 4 to 5 quarts (3.8 to 4.7 L) of water per 50 lbs. (22.7 kg) of powder. Mix only the amount of material that can be placed in 15 minutes. Pour the required amount of potable water into a clean mixing container, then add the measured amount of BlendCrete while continuing to mix and blend thoroughly for 1-2 minutes to a lump free putty like consistency. Small amounts of BlendCrete can be mixed using a trowel or a 1/2" drill (400-600 r.p.m.) and paddle.

Extended Mix: To fill areas deeper than 2" (51 mm), add 15 lbs. (6.8 kg) of clean saturated surface dry 3/8" (10 mm) pea gravel to 50 lbs. (22.7 kg) of BlendCrete™. First mix the BlendCrete as outlined, then add the pea gravel and mix for 60 seconds. Total mixing time is not to exceed 2-3 minutes.

Do not over water, re-temper or over mix. Clean out the mixing container thoroughly after each batch to avoid getting hardened mortar into the next batch.

Application

Immediately apply the fresh mortar into the entire surface, forcing BlendCrete firmly into the previously prepared area insuring full contact with all bonding surfaces. Slightly overfill the area. After initial set, using a trowel, shave BlendCrete to the desired final profile, shaving the patch from the center towards the bond edge at the existing surfaces. A wet spray may be used for final shaping. In deeper areas additional lifts can be made after the original patch has reached initial set. Score and roughen the original lift layer to improve bond between applications. BlendCrete can be placed in lifts up to 1" (25 mm) on vertical and overhead applications by holding the mortar in place until initial set has occurred.

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Clean Up

Use water to clean all tools immediately after use.

Best Performance

- Do not bridge moving cracks, control or expansion joints
- Protect from conditions that cause early water loss: such as wind, sunlight, heat, etc.
- The minimum applications thickness is 1/2" (12 mm)
- Do not overwork, re-temper, over water or add admixtures

Colors

#0 Dark gray

#2 Medium gray

#3 Light gray

Also available in white

Curing

Cure in accordance with American Concrete Institute procedure number 308. Protect patch from high temperature, high wind, low humidity, and direct sun causing rapid drying, by covering with wet burlap or plastic for up to 24 hours. A water based curing compound can also be used.

Do not apply to frozen or frost covered areas. The minimum ambient and surface temperatures should be 40° F (4° C) at time of application. Hot weather and conditions above 80° F (27° C) will reduce working time and accelerate set, while cold temperatures below 60° F (16° C) will have a retarding effect.

Refer to

- ACI 305 Standard on Hot Weather Concreting
- ACI 306 Standard on Cold Weather Concreting
- ACI 308 Standard Practice for Curing Concrete

Coverage

One 50 lb. (22.7 kg) bag yields approximately 0.48 $ft.^3$ (0.01 m^3)
With the addition of 15 lbs. (6.8 kg) of 3/8" (10 mm) pea gravel yield is approximately 0.60 $ft.^3$ (0.02 m^3)

Packaging

50 lbs. (22.7 kg) moisture resistant bag

Storage

Always keep in a cool dry place unexposed to sunlight.

Shelf Life

One year when stored properly in original unopened container.

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WARNING

WARNING: This product contains Portland cement and silica sand. Avoid contact with eyes and skin. Do not take internally. Crystalline silica sand may cause serious lung problems. Avoid breathing dust and wear a respirator in dusty areas. Contact with wet unhardened concrete, mortar, cement or cement mixtures can cause skin irritation, severe chemical burns or serious eye damage. Wear waterproof gloves, a fully buttoned long-sleeved shirt, full-length trousers and tight fitting safety goggles. If you have to stand in wet product, wear waterproof boots high enough to keep product from getting inside. If working on hands and knees, wear kneepads. Indirect contact through clothing can be as serious as direct contact. Promptly, rinse out wet product from clothing. . (Should be 3/32 inches high)

KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.

This product contains a chemical known to the state of California to cause cancer. Consult Material Safety Data Sheet for further information.

First Aid

FIRST AID:

Eye Contact: Flood eyes with water for at least 15 minutes and consult a physician immediately. DO NOT RUB EYES. Skin Contact: Wash exposed skin area with soap and water. Consult a physician if irritation persists. Inhalation: Remove to fresh air. Ingestion: Immediately consult a physician.

For additional information, call Bonsal American at 704-525-1621 or CHEMTREC at 800-424-9300 or 703-527-3887 outside of the USA. Refer to Material Safety Data Sheet (MSDS) for further information

Environmental Advisory

ENVIRONMENTAL ADVISORY:

Uncured or crushed cured cement is an environmental hazard, which may adversely affect fish and wildlife. Dispose of construction debris containing cement, including empty bags, at a permitted municipal disposal firm. Do not use crushed concrete as a fill near an aquatic habitat.

LIMITED WARRANTY

Bonsal American warrants that this product will be free from defects in material and workmanship, and will conform to specifications set forth in Bonsal American's product literature at the time of purchase. This warranty lasts for one (1) year from the date of purchase. Any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this express warranty. This warranty applies only if the product is stored, used, applied and maintained in strict accordance with Bonsal American's specifications and instructions. The sole and exclusive remedy under this warranty shall be replacement of the defective product or refund of the purchase price, at Bonsal American's option. CONSEQUENTIAL, SPECIAL AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY.

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