

# SURFACE BONDING CEMENT

## Description

ProSpec<sup>®</sup> Surface Bonding Cement is a structural, fiber reinforced portland cement based surface applied mortar for concrete block and masonry walls.

## Features

- Fiber reinforced
- Labor saving compared to conventional masonry construction
- One-coat stucco
- Noncombustible
- Trowel or spray apply
- Decorative, waterproof finish
- Greater flexural strength than concrete block walls built with mortar joints
- Resists 98 MPH (157.6 km/h) wind-driven rain

## Uses

- Dampproof coating for basement and foundation walls
- Crack resistant finish over concrete and concrete masonry
- Repair of masonry fire damaged walls
- Mine air barrier walls
- Piers for manufactured homes
- Structural and decorative coating for restoration and new construction
- Residential and commercial applications
- Build dry stack block walls without mortar
- Above and below grade

## Technical Data

Set Time ASTM C 191	Weatherability ASTM G 23 Type F (1,000 hours)	
Initial set 2.5 hours	Adhesion excellent - passed	
Final set 4 hours	Combustibility ASTM E 136	
Water Retention ASTM C 887 A6	Noncombustible	
77%	Fire/Flame Resistance ASTM E 119 Fire/Hose	
Compressive Strength ASTM C 109	8" (20 cm) 2-hour rated block - passed 2 Hours	
>5800 psi (40 MPa)	8" (20 cm) 4-hour rated block - passed 4 Hours	
Flexural Strength ASTM C 348	Air Transmission N.C.M.A. Test Procedure	
>1150 psi (8 MPa)	Leakage rate in cfm/100 Ft. <sup>2</sup>	
Wind Driven Rain Resistance Federal Specification TT-P-0035	Equivalent Air Pressure	
Excellent	1" (2.54 cm) of H <sub>2</sub> O    2" (9.0 cm) of H <sub>2</sub> O	
Water Absorption ASTM C 413	Conventional    Uncoated	
5.2 - 7.4% by weight	8" (20.3 cm) lt. wt. block	207.6 CFM (6.33 l/min/m <sup>2</sup> )    491.5 CFM (1496 l/min/m <sup>2</sup> )
Freeze-Thaw Resistance ASTM C 666 300 Cycles (Procedure A)	8" (20.3 cm) lt. wt. block - 1/8" (3.1 mm) coated one side	0.053 CFM (1.5 l/min)    0.115 CFM (3.2 l/min)
Durability factor: 99%		
Length change: +0.011%		

Test results obtained under controlled laboratory conditions. Reasonable variations can occur due to atmospheric and job site conditions.

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Preparation		Refer to
<ol style="list-style-type: none"> <li>1. Clean area and remove all unsound concrete, grease, oil, paint and any other foreign materials that will inhibit performance.</li> <li>2. Slick or sealed surfaces must be thoroughly roughened.</li> <li>3. Clean all reinforcing steel to bare white metal and coat with ProSpec<sup>®</sup> Rebar Coat if not covering within 8 hours.</li> </ol>	<ol style="list-style-type: none"> <li>4. Surface should be brought to a saturated surface dry (SSD) condition with clean potable water.</li> <li>5. For difficult to bond substrates, prime and/or add ProSpec 118 Primer or Acrylic Additive.</li> </ol> <p>NOTE: It is the responsibility of the installer/applicator to ensure that test areas are performed to determine the suitability of the product for its intended use.</p>	<ul style="list-style-type: none"> <li>• ASTM D 4258 <u>Surface Cleaning Concrete for Coating</u></li> <li>• ASTM D 4259 <u>Abrading Concrete</u></li> <li>• ASTM D 4261 <u>Surface Cleaning Concrete Unit Masonry for Coating</u></li> <li>• ICRI Guideline 03730 <u>Surface Preparation Guidelines for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Oxidation</u></li> <li>• ICRI Guideline 03731 <u>Selecting Application Methods for the Repair of Concrete Surfaces</u></li> <li>• ICRI Guideline 03732 <u>Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays</u></li> <li>• ACI 201.1R <u>Guide for Making a Condition Survey of Concrete in Service</u></li> <li>• ACI 308 <u>Standard Practice for Curing Concrete</u></li> </ul>

Mixing		
<p>Use clean tools.</p> <ol style="list-style-type: none"> <li>1. Add dry material to 1<sup>1</sup>/<sub>2</sub> gallons (5.6 L) of clean potable water per 50 lb. (22.7 kg) bag.</li> <li>2. For enhanced performance substitute 1 quart (0.9 L) of ProSpec 118 Primer or ProSpec Acrylic Additive for 1 quart (0.9 L) of water per 50 lb. (22.7 kg) bag.</li> </ol>	<p>ProSpec 118 Primer 1 qt. + 1<sup>1</sup>/<sub>4</sub> gallons (0.94 L) (4.7 L)</p> <p>ProSpec Acrylic Additive 2 qts. + 1 gallon (1.9 L) (3.78 L)</p> <ol style="list-style-type: none"> <li>3. Mix mechanically with a high torque electric drill not to exceed 600 r.p.m. with a paddle type mixing blade or in a mortar mixer.</li> </ol>	<ol style="list-style-type: none"> <li>4. Mix for a maximum of 3 minutes to ensure a homogenous consistency.</li> <li>5. Addition of cold water at high temperatures or warm water at low temperatures will aid in adjusting the set time.</li> <li>6. Mix only quantities that can be applied in one hour.</li> </ol>

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## Placement

1. Apply material to the substrate at a minimum thickness of 1/8" (3 mm). Gauge the thickness to insure proper coverage during application.
2. For structural applications, apply to both sides of the block wall.
3. Use sufficient pressure to insure good bond and uniform thickness.
4. Stop work at natural breaks.

## Dry Stack Block Walls:

1. Foundations must be structurally sound.
2. Level the first course of block in a full bed of mortar or ProSpec<sup>®</sup> Surface Bonding Cement (with no head joints).
3. Wait four hours before stacking additional blocks.
4. Stack the remaining courses without mortar from corners in a running bond pattern. Butt the blocks together.
5. Use galvanized brick ties as shims when necessary for leveling while stacking.
6. Fill gaps larger than 1/4" (6 mm) with the ProSpec Surface Bonding Cement prior to application on the wall.

## Spray Equipment:

NOTE: The following information is offered as a guide only. Specific product, equipment, application conditions and user experience will influence proper equipment selection. Consult with the equipment manufacturer for equipment handling techniques. Field test material with equipment prior to starting project.

## Finishing:

Pump Progressive Cavity	Hose Diameter	Gun	Tip	Pressure at Pump	Pressure at Gun
2.5L6	1" (25.4 mm) to 1.5" (3.8 cm)	Pole	7/16" (11.1 mm) to 9/16" (143 mm)	300 psi (2 MPa) to 400 psi (27 MPa)	Air compressor to furnish 50 psi (10° C)

Surface may be finished to a variety of stucco textures.

## Curing

Protect fresh coating from rain for 12 hours.

Materials modified with ProSpec Acrylic Additive or ProSpec 118 Primer should be air cured. If hot and/or drying winds or low humidity are present, fog spray as needed to replace water due to evaporation for 2 days.

## Yield

50 lb. (22.7 kg) bag covers 40 to 50 sq. ft. (4 to 5 sq. m) at 1/8" (3 mm) thick. Coverage will vary depending on the porosity and texture of the substrate.

## Colors

White or gray

## Packaging

50 lb. (22.7 kg) bag

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## Shelf Life

One year from date of manufacture.

## Best Performance

- Apply when air or substrate temperature is between 40° F (4° C) and 100° F (38° C) within 24 hours of application.
- Use only clean mixing container and tools.
- Do not retemper.
- Do not over trowel.
- Do not apply over substrates that are frozen or contain frost.
- Do not add any materials other than clean potable water or recommended additive.
- Do not exceed two stories or 16 ft. (4.8 m) in height for unsupported walls.
- Do not use structurally in chimneys, kilns or areas with high temperatures (150° F / 65.5° C ).
- Do not use sand or wood for leveling block courses.
- Do not apply asphalt emulsion within 48 hours of application.
- Do not apply cutback asphalt before curing 28 days.

NOTE: Proper application and installation of all ProSpec products are the responsibility of the end user.

## Caution

KEEP OUT OF REACH OF CHILDREN AND ANIMALS. Product is alkaline and may burn or irritate upon contact with eyes or skin. Do not take internally. Use of safety goggles, rubber gloves and dust respirator is recommended. Avoid prolonged

contact with clothing. This product contains crystalline silica. Take measures to contain and reduce dust. Prolonged exposure to crystalline silica may cause silicosis or other serious delayed lung injury.

Avoid breathing dust. For prolonged exposure wear a respirator approved for protection against crystalline silica dust. Crystalline silica has been classified by IARC and NTP as a carcinogen.

## First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes and SEEK IMMEDIATE MEDICAL ATTENTION. For skin contact, wash thoroughly with soap and water. If swallowed,

SEEK IMMEDIATE MEDICAL ATTENTION. 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.

LIMITED 1 YEAR WARRANTY FROM DATE OF MANUFACTURE: Bonsal American warrants that this product and the materials used therein meet or exceed the applicable standards listed and enforced at the time of manufacture. Bonsal American will replace any product or part which proves defective due to quality of ingredients used or due to the manufacturing process itself. This Warranty shall apply only if the product is used in strict accordance with applicable specifications and instructions provided by Bonsal American for its use, and Bonsal American shall not be liable otherwise. Replacement of any defective product, or, at Bonsal American's option, refund of the purchase of any defective product shall be the buyer's sole remedy under this Warranty, and Bonsal American shall in no event be liable for any damages in excess of the purchase price of the defective product. BONSAL AMERICAN SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES INCLUDING LOSS OF PROFITS OF ANY KIND. Product demonstrations are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. This Warranty constitutes the sole warranty given by Bonsal American in connection with this product. No modification of this Warranty in favor of any buyer shall be valid unless given in writing and signed by an officer of Bonsal American. Bonsal American has authorized no person to make or give any other warranties or representation, oral or written on its behalf. IN PARTICULAR, THERE ARE NO IMPLIED WARRANTIES, INCLUDING WITHOUT EXCEPTION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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