

# VERTICAL LEVELING MORTAR

## Description

ProSpec<sup>®</sup> Vertical Leveling Mortar is a one component, polymer modified high strength, rapid hardening, portland cement based, concrete repair material designed for vertical and overhead patching and repair work.

## Features

- Vertical and overhead general patching and repair
- Can be used from 1/4" (6 mm) to 4" (102 mm) thickness
- Freeze/thaw resistant
- Shrinkage compensating
- High early strength does not need forms
- Working time at 90° F (32° C) 10-15 minutes
- Meets requirements of ASTM C 387
- Rapid buildup
- Does not require primers or bond coats
- Can be used in structural repairs

## Uses

### For repair of concrete:

- Overhead beams
- Concrete walls
- Parking garage ceilings
- Tunnels
- Poured in place
- Precast
- Tilt up
- Balconies
- Manholes

## Technical Data

### Set Time ASTM C 191

Initial set	10-12 minutes
Final set	20-25 minutes

### Compressive Strength ASTM C 109

3 hours air cured	1,600 psi (11 MPa)
24 hours air cured	5,000 psi (34.5 MPa)
7 days air cured	6,800 psi (46.9 MPa)
28 days air cured	8,500 psi (58.6 MPa)

### Flexural Strength ASTM C 78

7 days air cured	1,100 psi (7.6 MPa)
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### Tensile Strength ASTM C 190

7 days	600 psi (4.1 MPa)
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### Length Change ASTM C 157

Air cured	-0.09%
Moist cure	+0.06%

### Shear Bond Strength ASTM C 882

28 days	3,000 psi (20.7 MPa)
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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
<p>Evaluation of the substrate by a qualified engineer, architect or contractor is recommended.</p> <p>Clean area and remove all unsound concrete, grease, oil, paint, and any other foreign materials that will inhibit performance. Slick or sealed surfaces must be thoroughly roughened.</p> <p>Full depth repairs where structural steel is exposed should be treated as follows:</p> <p>a. Exposed steel should be cleaned and prepared to an SSPC SP-3 or SP-10 condition. Repairs should be made immediately after cleaning and prior to flash rusting of the steel.</p> <p>b. Exposed steel which after preparation and cleaning cannot be repaired immediately should be coated with ProSpec<sup>®</sup> Rebar Coat.</p> <p><b>Surface Conditioning:</b> Saturate the substrate with clean (potable) water prior to application of repair mortar. Remove any standing water prior to placement.</p> <p>NOTE: ProSpec Vertical Leveling Mortar is designed for direct application to properly prepared, saturated surface dry (SSD) concrete substrates. No primers, bond or "slurry coats" should be used.</p>	<ul style="list-style-type: none"> <li>• ASTM D 4259 <u><a href="#">Abrading Concrete</a></u></li> <li>• ICRI Guideline 03730 <u><a href="#">Surface Preparation Guidelines for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Oxidation</a></u></li> <li>• ASTM D 4580 <u><a href="#">Measuring Delaminations in Concrete Bridge Decks by Sounding</a></u></li> <li>• ACI 201.1R <u><a href="#">Guide for Making a Conditions Survey of Concrete in Service</a></u></li> <li>• ACI 546R latest edition <u><a href="#">Concrete Repair Guide</a></u></li> </ul>

Mixing	
<p><b>General Repairs</b></p> <p>Use approximately 3 quarts (2.8 L) of clean water per 50 lbs. (22.6 kg). Add the ProSpec Vertical</p>	<p>Leveling Mortar to the water and mechanically mix for 3 minutes.</p>

Placement	
<p>The Air, Mix &amp; Substrate temperatures should all be between: 40° F (4° C) to 100° F (38° C). After mixing, apply a bed coat of Vertical Leveling Mortar in a thickness sufficient to completely cover the substrate. Use enough pressure to ensure complete contact with substrate. After applying the bed coat, but prior to drying, additional material can be applied to reach the desired thickness.</p> <p>Work from the edge of the repair to the center, on large patches (overhead) it may be desirable to over fill the patch, then after initial set, (but before final set) shave the patch to desired proportions. Finish by sponge floating.</p>	<p>Do not over work the material, minimal troweling should be required with Vertical Leveling Mortar.</p> <p>As a rule of thumb, the smaller the cavity dimensions, the thicker the application per lift. It is possible to place up to 4" (102 mm) thickness, with form work.</p>

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## Curing

Protect from rain, heat and direct sun for 24 hours. Do not wet the surface after material has been placed. Maintain at least 40° F (4° C) for 24 hours after application. If other materials are to be installed over the substrate, consult that manufacturer for recommendations.

## Colors

Gray

## Yield

### General Repairs (Trowel)

1 lb. (0.5 kg) covers approximately 1 sq. ft. (0.0929 m<sup>2</sup>) @ 1/8" (3 mm)

The yield for a 50 lb. (22.7 kg) bag is approximately 0.40 ft.<sup>3</sup> (0.011 m<sup>3</sup>)

## Packaging

50 lb. (22.7 kg) bag

## 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).
- DO NOT retemper after 10 minutes of mixing.
- DO NOT over trowel.
- DO NOT apply over substrates that are frozen or contain frost.
- DO NOT add or mix anything other than clean (potable) water with this product.
- DO NOT add excessive amounts of water.
- Do not exceed 2" in one lift.
- DO NOT apply over light weight concrete.
- DO NOT apply over fresh concrete less than 7 days old.
- DO NOT apply if rain is expected within 6 hours of application.

WARNING: Cracks in the material may reappear due to structural faults in the construction itself. The effectiveness of any repair depends on sound structures, proper evaluation, preparation, application and maintenance.

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## Caution

KEEP OUT OF REACH OF CHILDREN AND ANIMALS. MAY CAUSE SKIN AND EYE BURNS OR IRRITATION. INHALATION IS KNOWN TO CAUSE CANCER OR DELAYED LUNG INJURY.

Avoid contact with eyes and skin. This product contains hydraulic cement and lime. When mixed with water and/or latex, it results

in a solution that is highly alkaline and may burn or irritate the eyes or skin. Wear safety glasses or goggles, protective clothing, shoes, and gloves to prevent eye and skin contact. Do not take internally.

Avoid breathing dust. This product contains crystalline silica. Prolonged exposure to crystalline silica dust is known to cause lung

cancer or delayed lung injury, including silicosis. Take measures to eliminate or control dust while handling or placing this product. Wear a respirator approved for protection against crystalline silica dust.

**WARNING:** This product contains a chemical known to the state of California to cause cancer.

## First Aid

If swallowed, drink one or two glasses of water to dilute. Do not induce vomiting unless directed to do so by medical personnel.

Get immediate medical attention. In case of contact, flush eyes or skin thoroughly for a minimum

of 15 minutes with clean water and get prompt medical attention. Wash clothing and thoroughly clean shoes before reuse.

Read the Material Safety Data Sheet (MSDS) for this product prior to use. For additional

information call the Bonsal American at 704-525-1621.

For emergency information call CHEMTREC at 800-424-9300 or 703-527-3887 (Outside USA).

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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