

1. PRODUCT NAME

ProSpec® Level Set Wear Topping

2. MANUFACTURER

Bonsal American
8201 Arrowridge Blvd.
Charlotte, NC 28273-5678 USA

Tech Services: 1.800.334.0784
Fax: 1.704.529.5261
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3. PRODUCT DESCRIPTION

ProSpec Level Set Wear Topping is a premium, calcium aluminate cement-based, high strength topping designed for use in light manufacturing, malls, retail stores, warehouses and lobbies where a hard, flat, smooth surface is desired.

Features and Benefits

- Rapid setting for quick return to service
- Accepts foot traffic in 2 - 3 hours and rubber wheel traffic within 48 hours
- Ultra-smooth, cured surface
- Accepts stains, sealers and coatings within 24 hours
- Single lift applications from ¼" - 2" (6 - 51 mm) neat; can be extended to 5" (127 mm)
- Barrel or pump in place
- Does not promote growth of mold or mildew

Uses

- Malls, light manufacturing, retail stores, lobbies, warehouses and apartments
- Countertops
- Industrial applications subject to constant foot and vehicle traffic
- Correct imperfections in new construction

Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website www.prospec.com or contact CHEMTREC (24 hours availability) 800-424-9300 for International inquiries +011-703-527-3887, or contact Bonsal American Technical Services at 800-334-0784 (8:00 AM to 5:00 PM Eastern US Time).

4. TECHNICAL DATA

Working Time	25 - 35 minutes
pH	11
Set Time - ASTM C 191	
Final Set	80 - 140 minutes
Compressive Strength - ASTM C 109	
28 days	> 6,000 psi (42.1 MPa)
Flexural Strength ASTM C 348	
28 days	1,200 psi (8.3 MPa)
Flammability - ASTM E 648	
Ignition	None
Flame Propagation Distance	None
Avg. Critical Radiant Flux (CRF)	> 1.1 W / cm ²
Delamination / Warpage	None

Note: Test results obtained under controlled laboratory conditions at 72°F (22°C) and 50% relative humidity using 5.0 qts (4.8 L) water per 50 lbs of Level Set Wear Topping. Reasonable variations can occur due to atmospheric and job site conditions.

LEED Eligibility¹

- Regional Materials (MR-c5)
- Low-Emitting Materials (IEQ-c4.3)

Product Enhancement



Rapid Cure Technology (RCT®) - Improves the strength, controls shrinkage and prevents efflorescence of our products without sacrificing workability or working time.



Expansion Stabilization Technology (EST™) - Special additive designed to reduce the potential for cracking and shrinkage.

Packaging

Gray: 50 lb (22.7 kg) bag - Product #65550024
White: 50 lb (22.7 kg) bag - Product #65550005
Bright White: 50 lb (22.7 kg) bag - Product # #65550008

Shelf Life

6 months from the date of manufacture when stored in the original, unopened container, away from moisture, under cool, dry conditions and out of direct sunlight.

5. INSTALLATION

Preparation

All materials should be stored at 40°F (4°C) to 80°F (27°C) 24 hours prior to installation.

- Clean area and remove all unsound concrete, grease, oil, paint and any other foreign materials that will inhibit adhesion.
- Substrates must be stable, solid and structurally sound.
- The concrete surface must be mechanically profiled by shot blasting, sand blasting or scarifying to achieve an ICRI CSP 3 to 5.
- After cleaning and profiling test the substrate for moisture content. The substrate relative humidity (RH) must be ≤ 90% when tested per ASTM F 2170. Use ProSpec Moisture Guard Max to bring the moisture content within specified levels.
- Repair deep areas, holes and nonmoving cracks with ProSpec Floor Patch Pro prior to application and allow curing for a minimum of 3 hours.
- The direct tensile bond strength of the substrate must be > 72 psi (0.5 MPa) when tested per ASTM C 1583. If the direct tensile bond strength is < 72 psi (0.5 MPa), the substrate surface will need to be mechanically prepared, i.e. shot blasted, scarified or similar to achieve a sound surface.
- Concrete that has been power troweled must be tested to verify surface strength and adhesion.
- All surfaces require ProSpec Level Set Primer or ProSpec Level Set Primer Plus (see “Priming” section).
- Isolate, using foam tape or caulking, all perimeters and sharp corners such as column bases, pedestals, supports, etc.
- Install a bond breaker where vertical surfaces meet the new topping such as a self-adhering, minimum ¼” (6 mm), foam tape or similar product.
- For installations over other substrates, contact Technical Services.

Note: It is the responsibility of the installer/appliator to ensure the suitability of the product for its intended use.

Priming

- Level Set Primer or Level Set Primer Plus must be applied over the entire substrate leaving no bare spots, puddles or excess primer.
- Do not apply over standing water.
- For standard concrete use: Level Set Primer to water dilution rate of 1:1.
- For highly porous concrete, 2 coats of Level Set Primer may be necessary.
 - » First Coat: Use a primer to water dilution rate of 1:3.
 - » Second Coat: Use a primer to water dilution rate of 1:1.
- For non-porous substrates and tight concrete use Level Set Primer Plus.
- Allow the primer to dry to a tacky translucent film with no milky wet spots, typically 1 - 3 hours. If the primer turns clear within 30 minutes of application the substrate is highly porous and requires a second coat.

Priming (cont.)

- Level Set Primer/Primer Plus must be completely dry before installing Level Set Wear Topping.
- Primer must be reapplied if not covered with Level Set Wear Topping within 24 hours.
- Protect primed substrate from foot traffic.

Note: Reference Level Set Primer and Level Set Primer Plus for more information.

Expansion and Isolation Joints

- Honor all existing expansion joints, control joints and moving cracks through the Level Set Wear Topping. Failure to do so could result in delamination or cracking of the wear topping.

Job Mockups

Bonsal American, Inc. requires that when its ProSpec products are used in any application or as part of any system that includes other manufacturers' products, the contractor and/or design professional shall test all the system components collectively for compatibility, performance and long-term intended use in accordance with pertinent and accepted industry standards prior to any construction. Written documentation of the tests performed shall be satisfactory to the design professional and contractor. Test results must include the means and methods of application, products used, project-specific conditions being addressed, and standardized tests performed for each proposed system or variation.

Mixing

Barrel

1. Mix 2 bags of Level Set Wear Topping at a time.
2. In a 20 - 25 gallon drum add 5 qts (4.7 L) of clean potable water for EACH bag. Next add the Level Set Wear Topping while mixing at full speed with a paddle mixer attached to a heavy duty ½” drill (min 650 rpm). **Do not overwater.**
3. Mix completely for a minimum of 2 - 3 minutes until lump free, adding no additional water.
4. Over watering or over mixing will affect strength, surface abrasion resistance and may cause cracking or pinholes. This is indicated by settling of the sand or foam formation on the surface.
5. It is recommended that 2 mixing drums be used simultaneously, mixing in one and pouring with the other to maximize productivity.
6. Immediately clean all mixing equipment thoroughly with water to avoid hardened product in subsequent batches.

Pump

Pump and mixer must be in good working order before proceeding. Follow manufacturer instructions for setup and maintenance

Batch Mixer and Pump

- Use 5 qts of water per bag. **Do not overwater.**
- Minimum of 50 ft of hose is required.
- Use a “sock” at the end of the hose to catch all unmixed material.
- Test the mixed material periodically from the pump to ensure suitable mix and flow prior to general application.

Mixing (cont.)

Continuous Mixer and pump

- Pressure test rotor stator for proper mixing.
- Adjust the water level to a maximum of 5 qts of water per bag.

Do not overwater.

- Minimum of 100 ft of hose is required.
- Use a mesh “sock” at the end of the hose to catch all un-mixed material.
- Test the mixed material periodically from the pump to ensure suitable mix and flow prior to general application.

Application

Apply when air and substrate temperature is between 40°F (4°C) and 100°F (38°C). For applications outside this range of temperatures, contact Technical Services.

- Close all doors, windows and turn off HVAC to prevent drafts.
- Pour or pump the blended Level Set Wear Topping onto the floor and disperse with a gauge rake followed by smoothing the material with a surface smoother. Use cleated shoes to avoid leaving marks.
- Optimum results can be obtained by providing a continuous wet flow throughout the placement.
- Level Set Wear Topping will level itself for 20 minutes at 70°F (21°C). No troweling is needed. Temperature and humidity will affect flow, working time and set time.
- Avoid walking on Level Set Wear Topping until it hardens, typically 2 - 3 hours.
- Level Set Wear Topping will accept stains, water-based sealers and coatings in 24 hours.
- The surface of Level Set Wear Topping must always be protected with a coating or sealer. Since sealers and coatings vary, always do a test area, contacting the supplier for specific application directions.
- For installations from 2" - 5" (51 mm - 127 mm), Level Set Wear Topping can be extended with 15 lbs of clean washed 3/8" (10 mm) pea gravel per 50 lb bag. If the aggregate is wet, less water will be required to prevent over watering the Level Set Wear Topping.
 - Adding aggregate will decrease the workability and may require the application of a finish coat to obtain a smooth surface finish.
 - Allow initial extended application to dry for a minimum of 16 hours followed by the application of the Level Set Primer mixed 1:1 with water.
 - After primer is dry the Level Set Wear Topping can be applied.
 - Contact Technical Services for specific instructions when extending or capping other products using the Level Set Wear Topping.
- Protect the cured topping from traffic and dust from other trades until the sealer or coating has been applied and has completely cured.

Note: ProSpec Level Set Wear Topping will not correct or compensate for a structurally defective substrate. Faults in the substrate can appear in the underlayment. The use of alkali resistant glass fabric or galvanized metal reinforcing (Federal Specification QQL 101C) can be helpful in reducing reflective cracking.

Polishing of Level Set Wear Topping

- Level Set Epoxy Primer is required for use as a primer for Level Set Wear Topping that is to be polished.
- Contact ProSpec Technical Services for further information.

Limitations

- Do not use for exterior applications.
- Do not apply with a sprayer.
- Do not install over dimensionally unstable substrates such as gypsum, gypsum-based patching compounds, particle board, luan, asbestos or chip board.
- Do not install where steel, small or hard plastic wheeled traffic is expected to be used, as indentations can be expected.
- Do not subject to heavy duty manufacturing or chemical environments where high performance industrial toppings are being used.
- Do not install where sharp or heavy metal objects will be dragged over the floor as it may cause damages.
- Do not overwater, retemper or mix with other additives.
- Do not apply stains without first doing a mockup to test compatibility.
- Do not install at < 1/2" thickness when forklifts, pallet trucks or other rubber-wheeled vehicles are expected to be used.

Coverage

50 lb (22.7 kg) bag

Nominal Thickness	Approximate Coverage
1/4" (6 mm)	Up to 25 ft ² (2.32 m ²)
1/2" (12 mm)	Up to 12.5 ft ² (1.66 m ²)
1" (25 mm)	Up to 6.25 ft ² (0.83 m ²)

Note: Coverage will vary depending on the substrate surface texture.

6. TECHNICAL SERVICES

Technical assistance:

Information is available by calling ProSpec Technical Services Hotline (Hours - 8:00 AM to 5:00 PM EST):

Toll Free: 1.800.334.0784

Fax: 1.704.945.0309

Technical and safety literature:

To acquire technical and safety literature, please visit our website at www.prospec.com.

¹ ProSpec products can contribute to LEED credits within the Material Resource, (Recycled Content & Regional Materials) and Indoor Environmental Quality (Low Emitting Materials).

DANGER

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer.

Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Immediately call a poison center/doctor. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

This product contains Crystalline Silica, Quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

19 % of the mixture consists of ingredient(s) of unknown acute toxicity.

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.

Bonsal American, Inc. (Bonsal) warrants that this product is free from defects in material and workmanship, and will perform per the Bonsal American® product literature in effect at the time of purchase. This warranty is 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 used, in strict accord with Bonsal American published instructions. The sole and exclusive remedy under this warranty is replacement of the defective product or refund of the purchase price, at Bonsal's option. CONSEQUENTIAL, SPECIAL AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY. All claims under this warranty must be submitted to Bonsal by calling (800) 334-0784. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

PROSPEC
Floor Preparation • Concrete Repair • Tile Setting



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