



## LEVEL SET 200

### Description

ProSpec® Level Set 200 is a Calcium Aluminate Cement (CAC), non-gypsum based, single component, high strength, non-shrink, fast setting, self-leveling underlayment that provides a flat, smooth, durable surface for the installation of floor coverings.

### Features & Benefits

**Lower alkaline binder system creates an alkali barrier from the underlying concrete when installed at  $\geq 3/16"$  (5 mm) thick\***

- Protects organic adhesives and coatings from alkali decomposition and secondary VOC emission up to 90% RH
- Compatible with epoxy, urethane and other resin-based systems\*\*
- Contributes to better air quality
- Does not promote the growth of mold or mildew

**No sanding or grinding required**

- Time and labor savings; apply coatings and adhesives to finished surface

**Easy to use; no troweling required**

- Low in place cost

**Very fluid**

- Can be barrel mixed or pumped in place

**Rapid Cure Technology (RCT)™**

- Quick return to service
- Accepts foot traffic and tile and stone installations in 3-4 hours and moisture-sensitive floor covering in 16 hours

**Expansion Stabilization Technology (EST)™**

- Dimensionally stable installations (no shrinkage)

**Applications from 1/8" to 2" (51 mm) neat; can be extended to 5" (127 mm)**

- One step installation
- Can feather edge at transitions.

**Mixes with water only**

- No additional components required

\* Based on independent industry reports available upon request

\*\* Refer to resin manufacturer's technical information for specific installation recommendations

### Uses

- Interior use in leveling uneven rough concrete and camber problems
- Wooden floors\*
- Use over ceramic tile and terrazzo to provide a smooth even finish
- For other substrates, contact ProSpec Technical Services

\* Must use metal lath. Contact ProSpec Technical Services for details.

### Technical Data

<b>Working Time @ 70° F (21° C)</b>		<b>Tensile Strength ASTM C 190</b>	
25 to 35 minutes		28 days	525 psi (3.6 MPa)
<b>Set Time ASTM C 191 @ 70° F (21° C)</b>		<b>Density</b>	
Initial set	80 min.	Approx. 120 lbs./ft <sup>3</sup> (1922 kg./m <sup>3</sup> )	
Final set	120 min.	<b>Flammability ASTM E 648</b>	
<b>Compressive Strength ASTM C 109 (Air Cured)</b>		Ignition	None
4 hours	>1,000 psi (6.9 MPa)	Flame Propagation Distance	None
1 day	>3,000 psi (20.7 MPa)	Avg. Critical Radiant Flux (CRF)	>1.1W/cm <sup>2</sup>
7 days	>3,600 psi (24.8 MPa)	<b>Delamination / Warpage</b>	None
28 days	>5,000 psi (34.5 MPa)		
<b>Flexural Strength ASTM C 348</b>			
28 days	1,050 psi (7.2 MPa)		

NOTE: Test results obtained under controlled laboratory conditions at 72° F (22° C) and 50% relative humidity. Tested using 5.5 qts. (5.2 L) water per 50 lbs. of Level Set 200. Reasonable variations can occur due to atmospheric and job site conditions.

## LEVEL SET 200

### Preparation

(See Substrate Preparation Bulletin)

#### Concrete substrates:

- Clean area and remove all unsound concrete, grease, oil, paint and any other foreign materials that will inhibit performance
- Substrates must be stable, solid and structurally sound
- After cleaning and profiling test for MVER (moisture vapor emission rate - reference ASTM F1869) see Best Performance
- Repair deep areas, holes and nonmoving cracks with ProSpec® Vinyl Concrete Patch or Floor Patch prior to application and allow to cure for a minimum of 3 hours.
- Tensile strength of substrate must be > 72 psi DTBS (ASTM C-1583)
- If < 72 psi DTBS then the substrate surface will need to be mechanically prepared, i.e. Shotblast, Scarify or Aggressive Diamond Grinding or similar to achieve a sound floor.
- Concrete that has been power troweled must be tested to verify surface strength and adhesion, i.e. DTBS.
- All surfaces require Level Set Primer or Level Set Primer Plus (see "Priming" section)
- Tight concrete substrates and nonporous substrates require Level Set Primer Plus

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.

#### For residential use over interior wood floors that are structurally sound and not subject to moisture:

#### Best Performance:

- Residential installations only, 1/2" (13 mm) min. mortar thickness for areas up to 100 ft<sup>2</sup> (9.3 m<sup>2</sup>); 1 1/4" (32 mm) min. mortar thickness for areas greater than 100 ft<sup>2</sup> (9.3 m<sup>2</sup>)

#### Requirements:

- Cleavage membrane
- 2.5 lbs./yd<sup>2</sup> metal lath (min.), nailed with 1" (25 mm) hot dipped galvanized ribbed roofing nails or stapled with 1" (25 mm) crown galvanized staples
- Design floor areas over which tile is to be applied to have a deflection not greater than l/360 of the span. Make allowance for live load and impact as well as dead load, including weight of the tile and setting bed. Tape or caulk all plywood seams.

#### Non-Porous Substrates:

- Ceramic tile, terrazzo, quarry tile and stone must be solid, well bonded, clean and free of any bond breaking contaminants such as glazes, wax, oil, sealers etc.
- Surfaces must be mechanically abraded until a "profile" is obtained for the maximum bonding of Level Set 200. Wet mop the floor removing all debris, dust and loose material prior to installing the primer.

### Refer to

- ASTM D 4259 [Abrading Concrete](#)
- ACI 201.1R [Guide for Making a Conditions Survey of Concrete in Service](#)
- ACI 224.1R93 [Causes and Repair of Cracks in Concrete Structure](#)
- ICRI 03732 [Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays](#)

### Priming

- ProSpec Level Set Primer must be applied over entire substrate. Do not apply over standing water.
- For porous or highly porous substrates 2 coats of ProSpec Level Set Primer may be necessary. The dilution rate may vary from 1:1 to 1:3 (primer to water).
- For non-porous substrates, use Level Set Primer Plus.
- If the primer turns clear in approximately 30 minutes, then additional coats are needed.
- Allow the first coat to dry before applying additional coats.
- Allow ProSpec Level Set Primer to dry completely to a tacky translucent film with no milky wet spots before installation of the Level Set 200. Do not bridge over existing expansion or control joints.
- If primed floor is not covered with ProSpec Level Set 200 within 24 hours, primer must be reapplied.
- Protect primed substrate from foot traffic.
- Install a bond breaker where vertical surfaces meet the new topping.

## LEVEL SET 200

### Mixing

(See recommended tools)

- Mix 2 bags of Level Set 200 at a time. For EACH bag add 5.5 qts. (5.2 L) potable water into a clean mixing drum.
- Then add the Level Set 200 bags, while mixing at full speed with a paddle mixer attached to a heavy-duty 1/2" drill (min. 1,000 rpm).
- Mix completely for a minimum of 2-3 minutes until lump free, adding no additional water.
- It is recommended that two (2) Level Set mixing drums be used simultaneously.
- Mixing in one while pouring the other.
- This way there is no job slow down while still mixing for the required 2-3 minutes.

### Placement

- Pour the blended ProSpec Level Set 200 on the floor and disperse with the Level Set Spreader followed by smoothing the material with the Level Set Smoother. Cleated shoes must be worn to avoid leaving marks.
- Level Set 200 will level itself for 20 minutes at 70° F (21° C). No troweling needed.
- After use clean all mixing equipment thoroughly to avoid getting hardened product into subsequent batches.
- Level Set 200 can also be pumped affording high productivity and continuous smooth placement.
- Over watering or over mixing will affect strength, abrasion resistance and may cause cracking or pinholing.

#### Increased thickness:

- Level Set 200 can be applied from 1/8" to 2" (51 mm) without extension with aggregate, and up to 5" (127 mm) extended. To extend, blend the Level Set 200 with washed, dried, clean 3/8" (10 mm) pea gravel.

- Mix Level Set 200 first with water, then add 15 lbs. (6.8 kg) of the aggregate mixing until the pea gravel is coated, then place.
- Be aware that wet aggregate may cause over watering and the addition of aggregate will reduce the workability and may necessitate a finish coat. Allow the extended layer to dry, normally 16-18 hours.
- Prime the surface with Level Set Primer mixed 1:1 with water per the priming instructions outlined.
- When this primer is completely dry, install the smooth unextended finish layer.

NOTE: All applications require the use of ProSpec LEVEL SET PRIMERS prior to the placement of Level Set 200. Floor preparation is crucial in obtaining a successful underlayment installation. The contractor is responsible for ensuring the substrate is properly prepared prior to the application of ProSpec Level Set 200. A test application is recommended.

### Refer to

- RFCI (Resilient Floor Covering Institute publication) MRP: [Addressing Moisture Related Problems Relevant to Resilient Floor Coverings Installed Over Concrete](#)
- NOFMA (National Oak Flooring Institute) publication: [Installing Hardwood Flooring, Rev. 3/10/98](#)
- TCA (Tile Council of North America) Handbook for Ceramic Tile Installation
- American National Standard Specifications for the Installation of Ceramic Tile

Note: ProSpec Level Set 200 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.

### Curing

Protect from excessive drying due to temperature and air movement.

### Clean Up

Use water to clean all tools immediately after use.

### Tools

The following tools will ensure a satisfactory Level Set 200 installation. Call ProSpec for details.

- Level Set Mixing Drum
- Level Set Mixing Paddle
- Level Set Measuring Pails
- Level Set Depth Gauge Spreader
- Level Set Surface Smoother
- 1/2" Heavy-Duty Drill

## LEVEL SET 200

### Coverage

Per 50 lb. (22.7 kg) bag

Nominal Thickness	Approximate Coverage
1/8" (3 mm)	50 to 60 ft <sup>2</sup> (4.6 to 5.8 m <sup>2</sup> )
1/4" (6 mm)	25 to 30 ft <sup>2</sup> (2.3 to 2.8 m <sup>2</sup> )
1/2" (12 mm)	12 to 15 ft <sup>2</sup> (1.1 to 1.4 m <sup>2</sup> )

### Packaging

50 lb. (22.7 kg) moisture resistant bags

### Storage

Always keep in cool/dry place unexposed to sunlight and tightly reseal container. Prevent Level Set Primers and Acrylic Additive from freezing.

### Shelf Life

One year when stored properly in original unopened container.

### Best Performance

- For interior use only
- Apply when air or substrate temperature is between 40° F (4° C) and 100° F (38° C) within 24 hours of application
- Do not install when the substrate surface bond strength is <72 psi (0.5 MPa)
- Not a wearing surface; must be covered with flooring. For a wearing surface use ProSpec Level Set Wear Topping
- It is recommended that two mixing drums be used simultaneously, mixing one while pouring the other
- Do not over water, retemper, or add additional additives
- Always install a test area, insuring suitability of Level Set 200 for intended use
- Rely upon floor covering manufacturer for directions concerning maximum allowable moisture content of sub-floor, adhesive selection etc.
- Non-absorptive substrates require the use of Level Set Primer Plus

### Caution

KEEP OUT OF REACH OF CHILDREN AND ANIMALS. WARNING!

Contains Portland cement and silica sand. May irritate eyes and skin. Avoid contact with eyes or prolonged contact with skin. In case of contact,

flush thoroughly with water. The wearing of gloves and safety goggles is recommended.

In case of eye contact, flood eyes with potable water and call physician. DO NOT RUB EYES.

Do not take internally. Crystalline silica sand may cause serious lung problems. Avoid breathing dust and wear a respirator in dusty areas. Consult Material Safety Data Sheet for further information.

### First Aid

Inhalation: Remove to fresh air.  
Eye Contact: Irrigate eye with water or consult physician if irritation persists.

Skin Contact: Washed exposed skin area with soap and water; consult a physician if irritation persists.

Ingestion: Immediately consult a physician.

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