



LEVEL SET 300

Description

ProSpec® Level Set 300 is a premium 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 ≥ 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

Superior flow

- Easy to install at thin applications over large areas

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

- Designed for interior use in leveling uneven rough concrete, camber problems and plywood floors
- Use over ceramic tile, terrazzo and wood to provide a smooth even finish in restoration projects

Technical Data

Density		Flexural Strength ASTM C 348	
Approx. 120 lbs./ft ³ (1922 kg/m ³)		28 days	>1,100 psi (7.6 MPa)
Working Time @ 70° F (21° C)		Tensile Strength ASTM C 190	
25 to 35 minutes		28 days	570 psi (4.0 MPa)
Set Time ASTM C 191		Flammability ASTM E 648	
Initial Set	80 min.	Ignition	None
Final Set	120 min.	Flame Propagation Distance	None
Compressive Strength ASTM C 109 (Air Cured)		Avg. Critical Radiant Flux (CRF)	>1.1W/cm ²
4 hours	>1,500 psi (10.3 MPa)	Delamination / Warpage	None
1 day	>3,500 psi (24.1 MPa)		
7 days	>4,500 psi (31.0 MPa)		
28 days	>5,500 psi (44.8 MPa)		

NOTE: Test results obtained under controlled laboratory conditions at 72° F (22° C) and 50% relative humidity. Tested using 6.5 qts. water. Reasonable variations can occur due to atmospheric and job site conditions.

LEVEL SET 300

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 dries 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 300. Do not bridge over existing expansion or control joints.
- If primed floor is not covered with ProSpec Level Set 300 within 24 hours, primer must be reapplied.
- Protect primed substrate from foot traffic.
- Install a bond breaker where vertical surfaces meet the new topping.

Mixing

- (See recommended tools)
1. Mix 2 bags of Level Set 300 at a time. For EACH bag add 6.5 qts. (6.2 L) potable water into a clean mixing drum.
 2. Then add the Level Set 300 bags, while mixing at full speed with a paddle mixer attached to a heavy-duty 1/2" drill (min. 650 to 1,000 rpm).
 3. Mix completely for a minimum of 2-3 minutes until lump free, adding no additional water.
 4. It is recommended that two (2) Level Set mixing drums be used simultaneously.
 5. Mixing in one while pouring the other.
 6. This way there is no job slow down while still mixing for the required 2-3 minutes.

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 non-porous 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 ft² (9.3 m²); 1 1/4" (32 mm) min. mortar thickness for areas greater than 100 ft² (9.3 m²)

Requirements:

- Cleavage membrane
- 2.5 lbs./yd² 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 1/360 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 300. 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](#)

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Placement

- Pour the blended ProSpec Level Set 300 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 300 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 300 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 300 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 300 with washed, dried, clean 3/8" (10 mm) pea gravel.
- Mix Level Set 300 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 300. 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 300. 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 300 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 300 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 300

Coverage

Per 50 lb. (22.7 kg) bag

Nominal Thickness	Approximate Coverage
1/8" (3 mm)	56 to 66 ft ² (5.2 to 6.1 m ²)
1/4" (6 mm)	28 to 33 ft ² (2.6 to 3.1 m ²)
1/2" (12 mm)	14 to 17 ft ² (1.3 to 1.6 m ²)

Packaging

50 lb. (22.7 kg) moisture resistant bags

Storage

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

Shelf Life

One year when stored properly in original unopened container.

Best Performance

- For interior use only
- Do not install below 40° F (4° C) or above 100° F (38° C)
- Not a wearing surface, must be covered with flooring. For a wearing surface use ProSpec Level Set Wear Topping
- Do not over water, retemper, or add additional additives
- Always install a test area, insuring suitability of Level Set 300 for intended use
- Rely upon floor covering manufacturer for directions concerning maximum allowable moisture content of subfloor, adhesive selection etc.
- It is recommended that two mixing drums be used simultaneously, mixing one while pouring the other
- Non-absorptive substrates require the use of Level Set Primer Plus
- Do not install when the surface tensile bond strength of the substrate is <72 psi (0.5 MPa)

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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