

# LEVEL-1™

XLBrands®

CMP FORMULATED TECHNOLOGY



## ECONOMICAL CEMENT-BASED SELF-LEVELING UNDERLAYMENT

**LEVEL-1™** is a cement-based, interior, self-leveling underlayment that can be used to create a smooth, flat or level surface prior to the installation of floor coverings. Its extended working time, low shrinkage, and superior leveling properties make it the ideal product for renovation and new construction projects where next-day flooring installations are not critical. **LEVEL-1™** produces a hard durable surface that can be left open to normal construction traffic for up to one year before the installation of finished flooring, and it can be featheredged to meet existing transitions.

### KEY FEATURES

- Ideal for barrel-mixing or pumping applications
- Can be left open to normal construction traffic for up to 12 months
- Can be installed from 1/4" – 3" neat and to 5" properly extended

### PRODUCT FEATURES

- Maintains healing properties for up to 25 minutes
- Fast return to service -- Walkable in just 90 minutes
- Compatible with all adhesives approved for concrete
- Contributes points to LEED® certified projects
- Can be installed over green concrete
- Can be featheredged to meet existing elevations

### SUBSTRATE PREPARATION, MIXING AND PRIMING BY SUBSTRATE

**GENERAL NOTE:** LEVEL-1™ is not a vapor barrier, but is insensitive to moisture from unabsorbed water of convenience in cured concrete. Moisture testing should be completed using test methods ASTM F1869 for (MVER) and ASTM F2170 for (RH).

All surfaces must be clean, sound, dry, above 50°F (10°C) and free of oil, gypsum compounds, wax, grease, sealers and curing compounds, urethane, paint, asphalt, loose surface material or any contaminant that will act as a bond breaker.

Never use acid or mastic removers on any surface to which an XL Brands product will be applied. Substrate must have a minimum direct tensile bond test reading of at least 72 psi per (ASTM C1583). If sealers and curing compounds are present, they must be removed by mechanical means prior to application.

#### CONCRETE: (ROUGH, OPEN & POROUS)

Preparation: Weak or contaminated surfaces must be cleaned down to solid, sound concrete by mechanical means such as chipping, shot-blasting, grinding or scarifying.

Priming: Apply one coat of AS-100™ diluted 50/50 (1 part water : 1 part AS-100™) using a split tip broom. Pour out and work into surface, leave no puddles or bare spots. Apply LEVEL-1™ once

AS-100™ is dry (minimum 1 hour) and up to 24 hours. If primer has dried longer than 24 hours, a second coat of AS-100™ may be required.

Thickness: 1/8" (3.2 mm) over the highest point. 1/4" to 3" (6 to 7.6 cm) neat, and up to 5" (12.7 cm) properly extended.

**NON-POROUS:** (BURNISHED CONCRETE, EPOXY, TERRAZZO, CERAMIC AND QUARRY TILE):

Preparation: Mechanically abrade substrate to a dull finish by shot-blasting or grinding. Vacuum or mop to remove dust.

Priming: Apply one thin coat of AS-100™ (undiluted) using a 3/8" nap roller. Apply LEVEL-1™ once AS-100™ is dry (minimum 1 hour) and up to 24 hours. If AS-100™ has dried longer than 24 hours, a second coat of AS-100™ may be required.

**WOOD:** (REQUIRES MEDIMAT™ OR LATH INSTALLATION)

**NOTE:** Wood must be a minimum 3/4" (1.9 cm), L/360, untreated, APA Rated, Type-1, exterior grade, plywood, OSB or equal. The subfloor must be free of deflection (maximum L/360), considering both live and dead loads. Use an approved anti-fracture membrane over LEVEL-1™ where ceramic tile or stone are being installed.

Preparation: Prepare by sanding down to clean bare wood. Secure loose boards with deck screws and fill open seams with PrepStar™. Replace any weak or water damaged wood.

Priming: Apply one thin coat of AS-100™ (undiluted) using a 3/8" nap roller. Apply lath and LEVEL-1™ once AS-100™ is dry (minimum 2 hours) and up to 24 hours. If AS-100™ has dried longer than 24 hours, a second coat of AS-100™ may be required.

Thickness: 1/4" to 3" (.6 to 7.6 cm), and up to 1" (2.5 cm) per layer of MediMat™.

**ADHESIVE RESIDUE:** (THIN, TRANSLUCENT, NON-WATER-SOLUBLE, FREE OF TACK AND WELL BONDED)

Preparation: LEVEL-1™ can be installed over thin (translucent) sound, non-water-soluble adhesive residues that are free of tack and well bonded to the substrate. The adhesive cutback needs to be prepared using the wet scrape method as outlined in the Resilient Floor Covering Institute booklet "Recommended Work Practices for the Removal of Resilient Floor Coverings". Remove all patching materials below the adhesive and avoid applications where heat or excessive moisture will soften or degrade the adhesive.

**NOTE:** If unsure of the suitability or deflection or heavy loads are expected, refer to MediMat™ TDS.

Priming: Apply one thin coat of AS-100™ (undiluted) using a 3/8" nap roller. Apply LEVEL-1™ once AS-100™ is dry (minimum 2 hours and up to 24 hours). If AS-100™ has dried longer than 24 hours, a second coat of AS-100™ may be required.

Thickness: 1/8" (3.2 mm) over the highest point. 1/4" to 3" (.6 to 7.6 cm) neat, and up to 5" (12.7 cm) properly extended.

### MIXING

Mix 2-bag batches of LEVEL-1™. For each bag add a maximum 5.5 quarts (5.2 L) of cool, clean, potable water into a mixing drum. Then, add bags of LEVEL-1™ while mixing at full speed with a mixing paddle attached to a heavy duty 1/2" drill (min. 650 rpm). Mix for 2 minutes or until lump-free. Add no additional water and keep the mixing paddle immersed in the material to avoid entraining excess air.

### INSTALLATION

Barrel-Mixing: Pour the blended LEVEL-1™ on the floor immediately and disperse with a gauge rake followed by finishing with a smoothing paddle. Plastic athletic cleats should be worn when using the smoothing paddle to avoid leaving marks. LEVEL-1™ will maintain its workability and healing for up to 25 minutes.

Pumping: Deep placements and large projects are more efficiently installed with the use of a pump. Contact XL Brands for instructions, recommended pumping procedures and approved equipment.

**NOTE:** During application, and for first 24 hours, prevent excessive air movement but maintain adequate ventilation and protect material from direct sunlight. These variables can cause uneven curing patterns, a false set, and cracking.

### EXTENSION

Please contact the Technical Department for specific extension procedures.

### LIMITATIONS

It is the responsibility of the contractor to review the complete technical datasheets of XL Brands products referenced above as more detailed information may be required. The information provided above acts only as a general guideline and may vary based on jobsite conditions.

- Expansion or isolation joints and working cracks must be reflected through LEVEL-1™.
- LEVEL-1™ is self-curing. No wet curing methods or sealers and curing compounds should be used.
- On new concrete, always test for sealers and curing compounds which inhibit bond. If sealers and curing compounds are present, they must be removed by mechanical means prior to applying LEVEL-1™.
- Do not use over materials containing asbestos.
- Cooler temperatures, inadequate ventilation and higher humidity can extend drying times.
- It is the responsibility of the contractor to determine the suitability of this product for the desired application.
- While a 650 rpm drill does work, we do recommend a drill that is 850 rpm. This higher rpm will allow for faster, more uniform mixes.

## PHYSICAL PROPERTIES

<b>Packaging</b>	50 lb. bag, 48 bags per pallet		
<b>Color</b>	Grey		
<b>Shelf Life</b>	12 Months		
<b>Water Requirements</b>	5.5 quarts (5.2 L) per 50 lb. bag		
<b>Approx. Coverage: 50 lb. Bag</b>	1/4" (6.4 mm) covers 25 ft <sup>2</sup>		
	1/2" (12.7 mm) covers 12.5 ft <sup>2</sup>		
<b>Installation Thickness</b>	1/4"- 3" (.6 to 7.6 cm) neat		
	5" (12.7 cm) extended with stone		
<b>Application Temperature Range</b>	50°F to 95°F (10°C to 35°C)		
<b>Installed Weight (Per Sq. Ft.)</b>	2.2 lbs. @ 1/4" (6.4 mm)		
<b>Application Temperature Range</b>	50°F to 95°F (10°C to 35°C)		
<b>Set: ASTM C191 (70°F [21°C] @ 50% RH)</b>	Flow Time: 20 minutes		
	Final Set: 60 minutes		
<b>Accepts Coverings: (70°F [21°C] @ 50% RH)</b>	Ceramic, Quarry and Porcelain Tile: 6 Hours at 3/8" (8.3 mm) thickness		
	Common floor coverings: 24 Hours at 3/8" (8.3 mm) thickness		
<b>Compressive Strength: (ASTM C109)</b>	4 Hours	1000 psi	6.9 MPa
	24 Hours	3000 psi	20.7 MPa
	7 Days	4000 psi	27.6 MPa
	28 Days	5000 psi	34.5 MPa
<b>Flexural Strength: (ASTM C348)</b>	28 Days	1000 psi	6.9 MPa
<b>Tensile Strength: (ASTM C307)</b>	28 Days	520 psi	3.6 MPa
<b>Bond Strength: (ASTM C1583)</b>	28 Days	350 psi	2.4 MPa

**NOTE:** Cooler temperatures, higher humidity and inadequate ventilation can extend drying times

**COVERAGE CHART (MAY VARY DEPENDING ON SUBSTRATE CONDITIONS)**

Square Footage	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/2"	2"
100	4	6	8	10	12	14	16	24	32
500	20	30	40	50	60	70	80	120	160
1000	40	60	80	100	120	140	160	240	320
2000	80	120	160	200	240	280	320	480	640
3000	120	180	240	300	360	420	480	720	960
4000	160	240	320	400	480	560	640	960	1280
5000	200	300	400	500	600	700	800	1200	1600
10,000	400	600	800	1000	1200	1400	1600	2400	3200

**STORAGE AND SHELF LIFE**

Shelf life is 18 months from manufacturing date in unopened, original packaging. Must be stored in a cool, dry location, elevated (off the ground or floor) at temperatures between 40°F and 90°F (5°C and 32°C). Protect from moisture and excessive humidity. Do not expose to direct sunlight during storage.

**ELIGIBLE LEED® CREDITS**

Regional Materials  
Low Emitting Materials

**VOLATILE ORGANIC COMPOUNDS**

0 g/L (as calculated per SCAQMD 1168)

**CLEAN UP**

Clean tools with water immediately after use or by mechanical means once dry.

**HEALTH AND SAFETY**

Always refer to the Safety Data Sheet (SDS) prior to use for proper handling, clean up and spill containment. SDS may be obtained by calling 706-508-5907.

**FOR PROFESSIONAL USE ONLY**

**NOT LABELED FOR CONSUMER USE**

**KEEP OUT OF REACH OF CHILDREN**

**LIMITED WARRANTY**

Limited Warranty found at [www.bostik.com/us](http://www.bostik.com/us) or call 800.726.7845. TO THE MAXIMUM EXTENT ALLOWED BY LAW, BOSTIK DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. UNLESS OTHERWISE STATED IN THE LIMITED WARRANTY, THE SOLE REMEDY FOR BREACH OF WARRANTY IS REPLACEMENT OF THE PRODUCT OR REFUND OF THE BUYER'S PURCHASE PRICE. BOSTIK DISCLAIMS ANY LIABILITY FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES TO THE MAXIMUM EXTENT ALLOWED BY LAW. DISCLAIMERS OF IMPLIED WARRANTIES MAY NOT BE APPLICABLE TO CERTAIN CLASSES OF BUYERS AND SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. The Limited Warranty extends only to the original purchaser and is not transferable or assignable. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

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