



PRODUCT CATEGORY: SURFACE PREP

LP-1™

PREMIUM HYBRID GYPSUM & CEMENT-BASED SELF-LEVELING UNDERLAYMENT

Excellent compressive strength at 5,000 psi | Healing properties to 20 minutes

DESCRIPTION: LP-1™ is a premium, hybrid gypsum/cement-based self-leveling underlayment that can be installed from 1/4" up to 3" (.6 to 7.6 cm) without extension. It is designed for use over distressed gypsum subfloors, lightweight concrete, mud beds, structurally sound wood, asphalt, non-water-soluble adhesive residue, and is ideal for use on radiant or in-floor heating systems.

LP-1 can also be used for certain low-prep applications where shot-blasting and mechanically cleaning substrates cannot be performed. LP-1 provides a strong, durable substrate for floor coverings such as rubber, wood flooring, and resilient flooring.

PRODUCT FEATURES:

- Gypsum/Cement-hybrid formulation for rapid strength gain
- Ideal for repairing distressed gypsum, sound wood substrates, and low-prep applications
- Can be used over mud beds, asphalt, and lightweight concrete
- Ideal for pumping and barrel-mix applications
- Suitable for use with in-floor hydronic and electric radiant-heating systems
- May contribute points to LEED® projects

SUBSTRATE PREPARATION AND PRIMING BY SUBSTRATE:

GENERAL NOTE: LP-1 is not a vapor barrier and can only be used over dry substrates, on or above grade, in areas that are not subject to moisture. All slabs on grade must have a known, intact vapor barrier directly below the concrete or must have an application of XL Brands LockDown MVB(TM) and a proper primer applied before using self-leveling underlayment. Test per ASTM F1869 (for MVER) and ASTM F2170 (for RH). Do not use LP-1 if the readings exceed 3 lbs (MVER), 75% (RH). Test other substrates for dryness as per applicable ASTM guidelines, using an approved moisture meter or per ASTM F2659.

ALL: Surfaces must be clean, sound, dry, above 50°F (10°C), and free of felt paper, oil, wax, grease, sealers and curing compounds, urethane, paint, 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.

For Low-Prep Applications: Low-prep applications are generally areas that are not able to be shot blasted or mechanically abraded, such as applications over wood, lightweight concrete, or gypsum concrete. Substrates must be clean, solid, well bonded, non-water-soluble adhesive residues (follow/use wet-scrape method [RFCI], where applicable), structurally sound, free of dirt, dust, debris, and other contaminants that may act as bond breakers (common examples are waxes and curing compounds), and is a bondable surface. A bond test is recommended with AS-100™ and LP-1 to confirm the products will not re-emulsify residuals in low-prep applications.

XL Brand's eligible products for low-prep applications are considered low-shrinkage and have a (low) tensile pull that is optimized for this type of application.

GYPSUM UNDERLAYMENT, LIGHTWEIGHT CONCRETE, ASPHALT AND MORTAR BEDS

PREPARATION: Distressed gypsum underlayment must be completely dry, sound, free of cracks, and well bonded. Remove any loose patching materials, then sand and vacuum thoroughly. Lightweight concrete must be fully cured, completely dry, and sound. Over mud beds, well-bonded tile and thinset can remain. Remove any weak or sandy areas of the bed down to sound, solid material and thoroughly vacuum.

PRIMING (requires two coats): The first coat should be diluted and applied at 1 part AS-100: 3 parts water using a split-tip broom. Pour out and work into surface; leave no puddles or bare spots. After initial coat is dry (30–60 minutes), apply the second coat of AS-100 using 1 part water : 1 part AS-100 and place using a split-tip broom. Pour out and work into surface; leave no puddles or bare spots. Apply LP-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™ will be required.

THICKNESS: 1/4" up to 3" (.6 up to 7.6 cm).

WOOD

NOTE: Wood must be a minimum 3/4" (1.9 cm), untreated, APA-rated, Type-1, exterior-grade plywood, OSB, or equal.

PREPARATION: Sand down to clean, bare wood. Secure loose boards with deck screws and fill open seams with DashPatch™. Subfloors must be minimum 3/4" (1.9 cm), untreated, APA-rated, tongue & groove, Type 1, exterior-grade plywood, OSB, or equal. The subfloor must be free of deflection (maximum L/360), considering both live and dead loads.

PRIMING: Apply one thin coat of AS-100 (undiluted) using a 3/8" nap roller. Apply LP-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 will be required.

THICKNESS: 1/4" up to 3" (.6 up to 7.6 cm).

ADHESIVE RESIDUE:

PREPARATION: LP-1 can be installed over cutback and sound, non-water-soluble adhesive residues that are free of tack and well bonded. Remove any loose patching materials below the adhesive.

PRIMING: Apply one thin coat of AS-100 (undiluted) using a 3/8" nap roller. Apply LP-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™ will be required.

THICKNESS: 1/4" up to 3" (.6 up to 7.6 cm).

MIXING: Add 5.0 quarts (4.7 L) per 50 lb. bag of cool, clean, potable water to a mixing drum. Then, add bags of LP-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

PHYSICAL PROPERTIES	
Packaging	50 lb. bag, 48 bags per pallet
Color	Off-white
Shelf Life	12 Months
Water Requirements	5 quarts (4.7 L) per 50 lb. bag
Required Application Tools	Mixing Drum
	Mixing Paddle
	Gauge Rake
	Smoothing Paddle
	Measuring Pail
	Split-Tip Broom / 3/8" Nap Roller
Approx. Coverage: 50 lb. Bag	1/4" (6.4 mm) covers 22 ft ² (2 m ²)
	1/2" (12.7 mm) covers 11 ft ² (1 m ²)
Typical Installation Thickness	1/4" up to 3" (.6 to 7.6 cm)
Installed Weight (per sq. ft.)	2.2 lbs. @ 1/4" (6.4 mm)
Application Temperature Range	50°F to 95°F (10°C to 35°C)
Flow Time	Up to 20 Minutes
Set Time: ASTM C191 (70°F [21°C] @ 50% RH)	Final Set: 60 Minutes
Accepts Coverings	70°F (21°C), 50% RH 48 hours minimum at 1/4" (6.4 mm). Drying is a product of thickness, temperature, humidity, and jobsite conditions. Always conduct multiple tests to determine if underlayment is dry (see DRYING). Note: Cooler temps, inadequate ventilation, and higher humidity can extend drying times.
Compressive Strength: ASTM C109	4 Hours 1000 psi 6.9 MPa
	1 Day 3000 psi 20.7 MPa
	28 Days 5000 psi 34.5 MPa
Flexural Strength: ASTM C348	28 Days 1500 psi 10.3 MPa

no additional water and keep the mixing paddle immersed in the material to avoid trapping excess air.

INSTALLATION:

BARREL MIXING: Pour the blended LP-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. LP-1 will maintain its workability and healing for up to 20 minutes.

PUMPING: Deep placements and large projects are more efficiently installed with the use of a pump. Contact XL Brands for more information.

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, or cracking.

DRYING: NOTE: Test as per ASTM D4263. Testing must be conducted under climatized conditions.

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	5	7	9	12	14	16	19	28	37
500	23	34	46	57	68	79	90	135	180
1000	46	68	91	114	137	160	183	275	366
2000	91	137	182	227	273	318	364	545	727
3000	137	205	273	341	409	477	545	818	1090
4000	182	273	364	454	545	636	727	1090	1453
5000	228	341	454	568	681	795	908	1362	1816
10,000	455	681	908	1135	1362	1589	1816	2724	3632

Finished floor-covering materials can be installed after LP-1 has dried completely. Drying time will be a function of jobsite temperature, humidity, conditions, and installation thickness. Maintaining temperature and adequate ventilation will greatly aid in drying. After 48 hours, place tests to check LP-1 for dryness. Tightly duct tape all four sides of 18"x18" (45.7 cm x 45.7 cm) pieces of (3-4 mil) plastic in different locations. Conduct at least 1 test for each 1,000 square feet (92.9 square meters) of area. Let the tests sit undisturbed for 16 hours minimum, then lift the plastic and inspect for surface darkening. Darkening indicates moisture is still present and further drying time is required.

EXTENSION: Please contact the technical department for specific extension procedures.

APPLICATION NOTES:

- It is the responsibility of the contractor to review the complete technical data sheets of XL Brands products referenced in this document, as more detailed information may be required. The information provided acts only as a general guideline and may vary based on jobsite conditions.
- Expansion or isolation joints and working cracks must be reflected through LP-1.
- LP-1 is self-curing. No wet-curing methods, sealers, or curing compounds should be used.
- If LP-1 begins to set before it is applied, DO NOT re-temper by mixing or adding additional liquid.
- On new concrete, always test for sealers or curing compounds that inhibit the bond. If sealers or curing compounds are present, they must be removed by mechanical means prior to applying LP-1.
- Always refer to the technical data sheet of any other XL Brands product referenced for its full instructions and limitations.
- Do not use over materials containing asbestos.
- Although 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.

STORAGE: Shelf life is one year from manufacturing date in unopened, original packaging. Must be stored in a cool, dry location, elevated (off the ground or floor) at temperatures between 50°F and 90°F (10°C and 32°C). Protect from moisture and excessive humidity. Do not expose to direct sunlight during storage.

VOLATILE ORGANIC COMPOUNDS: 0 g/L (as calculated per SCAQMD 1168)

CLEANUP: 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, cleanup, and spill containment. SDS may be obtained by calling 706-508-5907.

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