

SUPERIOR CEMENT-BASED SELF-LEVELING UNDERLAYMENT

DESCRIPTION

PREMIUM UNDERLAYMENT SL is a Calcium Aluminate based, self-curing, self-leveling floor underlayment that is used to create a level, flat and durable surface prior to the installation of finished floor coverings. Mixed with water only, PREMIUM UNDERLAYMENT SL's Ethylene-Vinyl Acetate binding system creates an excellent bond to virtually any substrate and can be installed from featheredge up to 3,8 cm (1 ½") neat and up to 13 cm (5") extended with aggregate. PREMIUM UNDERLAYMENT SL provides a substrate that can accept ceramic tile and natural stone within 3-4 hours after application. Finished floor coverings, such as carpet, VCT, vinyl sheet goods, rubber, epoxy, and engineered wood plank, can be installed in as little as 24 hours.

RECOMMENDED FOR

- ▶ Plywood
- ▶ Steel decking
- ▶ Concrete
- ▶ Well-bonded cutback adhesive
- ▶ Terrazzo
- ▶ Ceramic or quarry tile

ADVANTAGES

- ▶ Suitable for use on all residential, commercial, and institutional applications
- ▶ Ideal for pumping and barrel mixing applications
- ▶ Maintains healing properties for over 25 minutes
- ▶ Water resistant - non-gypsum based
- ▶ Contains no protein additives
- ▶ Can be applied from featheredge to 13 cm (5")
- ▶ High early strength, walkable in just 3-4 hours
- ▶ No dangerous emissions or irritating fumes
- ▶ Lower alkali binder system creates an alkali barrier system from the underlying concrete when installed at 6 mm (1/4") thick, which protects organic adhesives and coatings from alkali decomposition and secondary VOC emissions up to 90% RH (water of convenience)

TECHNICAL CHARACTERISTICS

Characteristic	Test Result			Test Method
<i>Compressive Strength</i>	4 hours	1 day	28 days	ASTM C-109
	10,3 MPa (1500 psi)	20,7 MPa (3000 psi)	34,5 MPa (5000 psi)	
<i>Flexural Strength</i>	4 hours	1 day	28 days	ASTM C348
	-	-	> 7,6 MPa (1100 psi)	
<i>Set Time</i>	Working Time		Final Set	ASTM C 191 21°C (70°F), 50% RH
	30 mins		55 mins	
<i>Flammability</i>	Flame Spread	Fuel Contribution	Smoke Development	ASTM E84
	0	0	0	

Note: Cooler temperatures, inadequate ventilation and higher humidity can extend drying times. All data derived from tests under laboratory conditions, field conditions may yield slightly different results.

DIRECTIONS FOR USE

Surface Preparation:

NOTE: PREMIUM UNDERLAYMENT SL should not be installed over gypsum, latex patches, asphalt, coal tar, or lightweight insulating concrete.

Concrete floors: Substrate must be well-bonded and completely clean; free of oil, wax, grease, sealers, curing compounds, asphalt, paint, dirt, loose surface material and any contaminant that will act as a bond-breaker. Weak concrete surfaces must be cleaned down to solid sound concrete by mechanical means. Acid etching or chemical cleaning is not acceptable. Expansion Joints in the concrete substrate must be reflected through the applied layer of PREMIUM UNDERLAYMENT SL.

Over cutback and adhesive residue: Cutback and adhesives may contain asbestos fibers whose inhalation is harmful. Consult government agencies for rules concerning the removal of asbestos-containing flooring and adhesives. Mechanically remove adhesive residue to a translucent, clean, well bonded film. PREMIUM UNDERLAYMENT SL can be installed over non-asbestos adhesives if the residue is solid, well bonded to the substrate and not affected by water. Avoid applications where heat may soften the adhesive, causing de-lamination.

Wood: Wooden sub-floors, such as 2 cm (3/4") tongue and groove, APA rated Type 1, Exterior Exposure plywood and parquet, must be clean, free of varnish, shellac or any contaminant that hinders bond. If needed, sand down to bare clean wood. Do not use chemical cleaners. The substrate must be solid and secure to provide a rigid base. Any moving boards should be re-nailed and open joints filled with a feather edge patch. Prime the substrate as outlined in "Substrate Priming." Then anchor a thin galvanized expanded diamond metal lath (3,4 plaster lath) to the sub-floor, securing every 15 cm (6") to prevent movement, overlapping adjacent pieces by 2,5 cm (1").

Non-porous substrates: Terrazzo, ceramic and quarry tile, burnished concrete, and epoxy coatings 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. Vacuum all debris, dust and loose material prior to installing the primer.

Steel decking: All metal sub-floors must be clean and free of rust, oil, grease, and all other contaminants. Steel decking must be structurally sound and properly anchored. Metal foils must be completely bonded to the substrate. Sandblast, wire brush or use other mechanical methods to remove rust and other contaminants from the surface of the metal. For steel decking, paint the surface with an anti-corrosive coating to prevent rust from recurring. Aluminum, copper and lead do not require this treatment.

SUPERIOR CEMENT-BASED SELF-LEVELING UNDERLAYMENT

Priming:

Concrete: All substrates must be clean and dry before primer is applied. Sub-floor temperature must be at least 10°C (50°F). 3,8 L (1 gal) of SELF-LEVELING PRIMER (for non-porous surfaces use PREMIUM PRIMER MP) mixed with one gallon of clean potable water will cover approximately 32-37 m² (350-400 sq ft) of floor area. Primer must be applied evenly with a nylon push broom with exploded tips. DO NOT use paint rollers, mops, or spray equipment. Apply a thin primer layer leaving no bare spots, puddles or excess primer. Allow to dry to a clear, thin film (usually 3 hours, but less than 24 hours).

IMPORTANT: PREMIUM UNDERLAYMENT SL must be applied within 48 hours of priming to ensure that a good bond is achieved between primer and substrate.

Non-porous sub-floors, wood, and cutback: Prime with PREMIUM PRIMER MP. Apply one coat of undiluted PREMIUM PRIMER MP using a 2 cm (3/8") nap roller. Apply a thin film, leave no puddles or bare spots. Allow primer to dry (minimum 2 hours, maximum 24 hours).

Metal: Contact PENETRON HELLAS S.A. for specific priming recommendations.

Mixing and Installation:

IMPORTANT: To ensure installation success, be sure to test a small area for compatibility, bond strength and performance.

NOTE 1: Before application, close all doors and windows and protect from direct sunlight. These variables can cause uneven curing patterns.

NOTE 2: PENETRON HELLAS S.A. recommends setting up a "mixing station" where all product mixing takes place. Dusting usually occurs in the area where the product is mixed and could have a negative effect on the product's bond to the substrate. Limiting the areas where mixing occurs can assure that the floor will be kept clean and "Bond-Breaker" free.

Manual installation: Mix 2-bags of PREMIUM UNDERLAYMENT SL at a time. For each bag add 5,7 to a maximum 6,2 L (6,0 to 6,5 quarts) of clean potable water into a mixing drum. Then, add the bags of PREMIUM UNDERLAYMENT SL while mixing at full speed with a paddle mixer attached to a heavy duty 1/2" drill (min. 650 rpm). Mix completely for a minimum of 2-3 minutes until lump free, adding no additional water. Over wood, cutback, metal and non-porous sub-floors the addition of ACRYLIC BONDCRETE is required to increase the resiliency of PREMIUM UNDERLAYMENT SL. Mix 1,9 L (2 quarts) of ACRYLIC BONDCRETE with 4,7 L (5 quarts) of water for each bag of PREMIUM UNDERLAYMENT SL used and combine as outlined above. Pour the blended PREMIUM UNDERLAYMENT SL on the floor and disperse with a gauge rake, followed by smoothing the material with a smoother. Cleated shoes must be worn to avoid leaving

marks. PREMIUM UNDERLAYMENT SL will maintain its workability and leveling properties for 25 minutes.

Pumping:

Please contact PENETRON HELLAS S.A. for instructions on recommended pumping procedures and equipment.

Extension:

PREMIUM UNDERLAYMENT SL can be installed up to 13 cm (5") thick when extended with aggregate. Please contact PENETRON HELLAS S.A., Ltd. technical service department regarding job specific extension procedures.

Curing:

PREMIUM UNDERLAYMENT SL is self-curing, self-leveling underlayment. Do not use damp curing methods or curing and sealing compounds. PREMIUM UNDERLAYMENT SL is walkable within 3-4 hours after installation. Protect PREMIUM UNDERLAYMENT SL from excessive heat conditions during its initial curing stage. Turn off all forced ventilation and radiant heat systems for the first 24 hours.

APPLICATION TOOLS

Mixing drum, mixing paddle, depth gage spreader, surface smoother, ½" heavy duty drill (min. 650 rpm).

CLEAN UP

Clean tools with water immediately after use prior to material hardening.

Approximate coverage (Yield) per 22,7 kg (50 lb) bag:

3 mm (1/8")	4,7 m ² (50 ft ²)
6 mm (1/4")	2,3 m ² (25 ft ²)
10 mm (3/8")	1,7 m ² (18,8 ft ²)

SPECIAL CONSIDERATIONS

This product is ready to use with the addition of water. DO NOT add any materials or additives to mixture other than those described above.

During application, protect topping from direct sunlight, wind, rain, snow and other forms of moisture.

For more detailed instructions, alternative application methods, or information concerning the compatibility of the PENETRON treatment with other products or technologies, contact your local Penetron representative.

Cooler temperatures, inadequate ventilation and higher humidity can extend drying times. All data derived from tests under laboratory conditions; field conditions may yield slightly different results.

Contact PENETRON HELLAS S.A. for additional information, regarding your project.

PACKAGING

PREMIUM UNDERLAYMENT SL is available in 22,7 kg (50 lb) bags.

SUPERIOR CEMENT-BASED SELF-LEVELING UNDERLAYMENT

STORAGE / SHELF LIFE

PENETRON products must be stored dry at a minimum temperature of 7°C (45°F). Shelf life is one year when stored under proper conditions.

SAFE HANDLING INFORMATION

Wear appropriate eye, skin and breathing protection when using this product. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. For further information please refer to Safety Data Sheet. PENETRON HELLAS S.A. has recently updated Safety Data Sheet on the safe use of PENETRON® products. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers. KEEP OUT OF REACH OF CHILDREN.

CERTIFICATION



1085

Penetron International, Ltd.
601 South Tenth Street, Unit 300
Allentown, PA 18103

11

1085-CPR-0040

DOP NO: 10.12006D310322-01
EN 1504-3

PREMIUM UNDERLAYMENT SL

Products and systems for structural and non-structural protection and repair of concrete structures

Compressive strength: Class R3 (≥ 25 MPa)

Chloride ion content: < 0.10 % by mass

Adhesive bond: NPD

Restrained shrinkage, expanding: NPD

Elastic modulus: NPD

Thermal compatibility (Part 1): NPD

Carbonation resistance: deemed to have no corrosive effect

Dangerous substances: NPD

Reaction to fire: NPD

SUPERIOR CEMENT-BASED SELF-LEVELING UNDERLAYMENT

WARRANTY - DISCLAIMER

PENETRON HELLAS S.A. warrants that its products are manufactured under certified ISO Standard procedures, are of excellent quality and shall be free from material defects and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON HELLAS S.A. shall be limited to replacement of the material proven to be defective, since the standard application procedures have been met and the suitability of the product for the particular application have been proven. PENETRON HELLAS S.A. makes no warranty as to merchantability of fitness for a particular purpose. User, after contacting the distributor of the product, shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith. While every care has been taken, the information provided in this product's data sheet make no part of any contract. All recommendations, technical data and test data contained in this product's data sheet are based upon the results of control laboratory tests or in actual field tests. However, PENETRON HELLAS S.A. makes no warranty of any kind, concerning this data. In any case, this data is given in good faith based in the PENETRON HELLAS S.A. experience, till the publication of this sheet. Due to variance in storage, handling and applications of the materials, PENETRON HELLAS S.A. accepts no liability for the results obtained. It is suggested that potential users try small applications to determine the suitability of each individual product for their specific requirements. The users should always refer to the most recent edition of the product's data sheet. PENETRON HELLAS S.A. may particularly differentiate its versions of the product's data sheet compared with those of PENETRON INTERNATIONAL LTD or respective PENETRON companies worldwide. These changes are due to text formatting, different application weathering and procedures or different product names and aim at the optimal consumer information.