

HIGHLY DURABLE CEMENT-BASED SELF-LEVELING SCREED

DESCRIPTION

INDUSTRIAL TOPPING SL is a single component, smooth flowing, economic, pumpable, self-leveling, fast-setting overlayment, intended as a restorative wearing surface over distressed, worn or rain damaged, structurally sound concrete of indoor or outdoor applications. It contains polymer modified Portland cement, combined with mineral aggregate to produce fast-setting, high-strength characteristics.

RECOMMENDED FOR

- ▶ Aisleways, manufacturing, storage and shipping
- ▶ Distribution centers and warehouses
- ▶ Distressed and worn concrete floors
- ▶ Rain damaged slabs
- ▶ Parking garage floors
- ▶ Public utilities
- ▶ Convention hall floors
- ▶ Correctional institutions
- ▶ Showrooms
- ▶ Floors designed to meet a specific flatness

ADVANTAGES

- ▶ Ready to use with addition of water or may be extended with aggregates
- ▶ Highly durable
- ▶ Economical in-place cost
- ▶ Highly fluid for pumped or poured application
- ▶ Crack and shrink resistant
- ▶ Rapid high-strength gain
- ▶ Ready for limited foot traffic in 4 hours
- ▶ Maintains workability for over 15 minutes
- ▶ Non-gypsum based
- ▶ Reduced sound transmission
- ▶ Moisture resistant
- ▶ Contains zero volatile organic content (VOC) and is safe for use both outdoors and in confined indoor spaces

TECHNICAL CHARACTERISTICS

Characteristic	Test Result			Test Method
	1 day	7 days	28 days	
<i>Compressive Strength</i>				ASTM C 109
	2,800 (19.3 MPa)	4,300 psi (29.6 MPa)	6,000 psi (41.4 MPa)	
<i>Flexural Strength</i>	1 day	7 days	28 days	ASTM C 348
	-	-	950-1,000 psi (6.6-6.9 MPa)	
<i>Tensile Bond Strength</i>	1 day	7 days	28 days	
	-	-	200 psi (1.4 MPa)	
<i>Set Time</i>	Working Time	Initial Set	Final Set	ASTM C 191
	25 mins	35 mins	40 mins	
<i>Type Failure</i>	Bond			
<i>Cracking</i>	No cracking observed through the 28-day test			

All data are average values obtained under laboratory conditions. Impractical use, temperature, humidity and absorption of the substrate may influence the above given values.

DIRECTIONS FOR USE

Surface Preparation: Concrete substrate must be cleaned immediately prior to primer and topping application should be free of dust, oil, curing compounds, paints, asphalt, scalers, coatings and/or any other matter that may cause loss of bond. Remove any loose, frozen, broken, carbonated concrete. Shot-blasting equipment is recommended for achieving mechanical removal of unsound concrete, coatings, curing compounds, sealers, etc. Joints, cracks and drilled or sawed holes should be filled or grouted to prevent seepage of primer and underlayment. Joints in substrate must be reflected (tooled or sawed) in applied topping.

NOTE: Proper bond, and therefore preparation are crucial in obtaining a successful overlayment installation. The installing contractor is responsible for ensuring substrate is properly prepared prior to application of INDUSTRIAL TOPPING SL. To ensure installation success, be sure to test a small area for compatibility, bond strength and performance.

Priming: SELF-LEVELING PRIMER is customarily mixed 1:1 with clean water to aid in bonding INDUSTRIAL TOPPING SL to substrate and to avoid "pinholing" caused by entrapped air in substrate. Primer may be applied up to 72 hours before application of topping. Dilute SELF-LEVELING PRIMER 1:1 with clean water. Extremely porous concrete may require two coats of primer mixture or one coat of undiluted primer. 1 gal (3.78 Lt) of SELF-LEVELING PRIMER mixed with 1 gal (3.78 Lt) of water will cover approximately 350-400 ft² (32.5-37.0 m²) of floor area. Using a push broom with the exploded tips, apply a thin primer coat and allow to completely dry (approximately 3-4 hours at 70% RH) prior to application of INDUSTRIAL TOPPING SL.

Mixing: Add topping to water. DO NOT reverse this process by adding water to material. Mix in a mixer/pump or mechanical concrete mixer, following manufacturer's instructions. Use precisely 4.5 qts (4.25 Lt) of clean water per 50 lb (22.7 kg) bag and mix for 1-2 minutes, until mixture is smooth and free of lumps.

For small jobs, use a stainless steel paddle with a 1/2" (12 mm) min. 650 rpm drill mixing to a lump free consistency.

For applications over 2" (5 cm) in thickness, extend mixture with precisely 15 lbs (6.8 kg) of clean washed and dry, 3/8" (10 mm) quartz aggregates (QUARTZ SAND MIX or similar) per 50 lb (22.7 kg) bag.

NOTE: When extending, mix neat topping, as described above. Then, add quartz aggregates (QUARTZ SAND MIX or similar) and mix again, until smooth and free of lumps.

Application: Ensure base slab temperature is over 40 °F (4.5 °C) and ambient temperature will not be below 50 °F (10 °C), during placement and/or before underlayment will take final set. INDUSTRIAL TOPPING SL flows best, if mixing water is approximately 70 °F (21 °C).

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Maintain mixing water temperature at 50 °F – 90 °F (10 °C – 32 °C). Pour or pump mixed topping to desired thickness, but not less than 1/4" (6 mm). Properly mixed topping will seek its own level within 15 minutes at 65 °F (18 °C). A hand spreader or concrete come-along may be used to prompt material around pipes and hard to reach areas.

Curing: INDUSTRIAL TOPPING SL is self-curing. It is walkable in 3-4 hours at 73 °F (23 °C). Wait 24 hours or more, before installing floor covering or light traffic. If applying a protective coating system, verify compatibility by installing a test application.

YIELD AND RATE OF APPLICATION

One 50 lb (22.7 kg) bag of INDUSTRIAL TOPPING SL mixed with 4.5 qts (4.25 Lt) of clean mixing water will yield approximately 23 ft² (2.1 m²) of mixture at 1/4" (6 mm) in thickness.

For thickness over 2" (5 cm) add 15 lbs (6.8 kg) of clean, washed, dry 3/8" (9 mm) quartz aggregates (QUARTZ SAND MIX or similar) per 50 lb (22.7 kg) bag of INDUSTRIAL TOPPING SL.

SPECIAL CONSIDERATIONS

DO NOT use this product, if bag is damaged or opened. 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.

DO NOT apply INDUSTRIAL TOPPING SL over construction joints or expansion joints.

DO NOT use on floors that will be exposed to acids (or their salts) or other materials that may seriously and/or rapidly attack the Portland cement.

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

Consult PENETRON HELLAS, when questionable conditions prevail or for additional information.

PACKAGING

INDUSTRIAL TOPPING SL is supplied in 50 lb (22.7 kg) kraft paper bags, reinforced with a polyethylene inner lining to ensure moisture resistance.

STORAGE / SHELF LIFE

INDUSTRIAL TOPPING SL has a nominal shelf life of 12 months from the date of manufacture, when unopened bags are properly stored in a cool, dry and shaded environment.

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SAFE HANDLING INFORMATION

Avoid contact with eyes. Wear suitable protective eyewear. Avoid prolonged or repeated contact with skin. Wear gloves. Wear suitable protective clothing. Do not breathe dust. In case of insufficient ventilation, wear respiratory equipment. Wash clothing before reuse. Wash exposed skin with soap and water. If breathing is difficult, move person to fresh air. This product, when discarded or disposed of, is not listed as a hazardous waste in federal regulations. Dispose in a landfill in accordance with local regulations. 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.

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 are 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.

CERTIFICATION



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PENETRON INDUSTRIAL TOPPING SL
Products and systems for structural and non-structural protection and repair of concrete structures
Compressive strength: Class R3 (≥ 25 MPa)
Chloride content: < 0.15 % by mass
Adhesive bond: NPD
Restrained shrinkage, expanding: NPD
Elastic modulus: NPD
Thermal compatibility (Part 1): NPD
Corrosion behaviour: deemed to have no corrosive effect
Dangerous substances: NPD
Reaction to fire: NPD

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