

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. 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 pea gravel
- ▶ 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
Compressive Strength	1 day	7 days	28 days	ASTM C 109
	19,3 MPa (2800) psi	29,6 MPa (4300 psi)	41,4 MPa (6000 psi)	
Flexural Strength	1 day	7 days	28 days	ASTM C 348
	-	-	6,6-6,9 MPa (950-1000 psi)	
Set Time	Working Time	Initial Set	Final Set	ASTM C 191
	25 mins	35 mins	40 mins	

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: 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 is 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. 3,78 L of SELF-LEVELING PRIMER mixed with 3,78 L of water will cover approximately 32.5-37.0 m² (350-400 ft²) 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 70% humidity) 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 4,25 L (4,5 qts) of clean water per 22,7 kg (50 lb) 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 13 mm (½") min. 650 rpm drill mixing to a lump free consistency.

For applications over 5 cm (2") in thickness, extend mixture with precisely 6,8 kg (15 lbs) of clean washed and dry, 10 mm (3/8") quartz aggregates (QUARTZ SAND MIX or similar) per 22,7 kg (50 lb) bag.

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

Application: Ensure base slab temperature is over 4 °C (40 °F) and ambient temperature will not be below 10 °C (50 °F), during placement and/or before underlayment will take final set. INDUSTRIAL TOPPING SL flows best, if mixing water is approximately 21 °C (70 °F).

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

YIELD AND RATE OF APPLICATION

One 22,7 kg (50 lb) bag of INDUSTRIAL TOPPING SL mixed with 4,25 L (4,5 qts) of clean mixing water will yield approximately as follows:

6 mm (1/4")	2,1 m ² (23 ft ²)
10 mm (3/8")	1,6 m ² (17,25 ft ²)
13 mm (1/2")	1,1 m ² (11,5 ft ²)

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Curing: INDUSTRIAL TOPPING SL is self-curing. Protect from excessive heat, cold, direct sunlight and forced air movement conditions during its initial curing stage and for the first 24 hours. These variables can cause uneven curing patterns, a false set, and cracking. If applying a protective coating system, verify compatibility by installing a test application.

Cure time (23 °C / 73 °F): Accepts floor covering, polishing, resinous coating/toppings or light traffic in 24 hours.

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 22,7 kg (50 lb) 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.

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.

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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 ion content: < 0.15 % 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