

PENETRON INDUSTRIAL SELF-LEVELING TOPPING

DESCRIPTION

Penetron Industrial Self-Leveling Topping is a single component, smooth flowing, economic, pumpable, self-leveling, fast-setting, over-layment 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.

TYPICAL APPLICATIONS

- ◆ 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

FEATURES/BENEFITS

- ◆ 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 four hours
- ◆ Maintains workability for over 15 minutes
- ◆ Non-gypsum based
- ◆ Reduced sound transmission
- ◆ Moisture resistant

PENETRON PRIMER

Penetron Self-Leveling Primer is customarily mixed 1:1 with clean water to aid in bonding the Self-Leveling to substrate and to avoid "pinholing" caused by entrapped air in substrate.

PREPARATION

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 Penetron Industrial Self-Leveling Topping. It is suggested that a 10' x 10' (3 x 3 m) test application be made.

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 loose, frozen, broken, carbonated concrete. Shotblasting equipment is recommended for achieving mechanical removal of unsound concrete, coatings, curing compounds, sealers, etc.

Joins, 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.

SUBSTRATE PRIMING

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. One gallon of Primer mixed with one gallon of water will cover approximately 350-400 ft² (32.5 - 37.0 m²) of floor area. Using a push broom, apply a thin primer coat and allow to completely dry (at least 3-4 hours @ 70% humidity) prior to application of Penetron Industrial Self-Leveling Topping.

MIXING

Add topping to water! DO NOT reverse this process by adding water to material.

Mix in a mixer/pump, following manufacturer's instructions, or mechanical concrete mixer. Use precisely 4.5 qts (4.25 liters) 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" (9 mm) pea gravel per 50 lb (22.7 kg) bag.

Important: When extending, mix neat topping as described above. Then, add pea gravel 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. Penetron Industrial Self-Leveling Topping flows best if mixing water is approximately 70°F (21°C). 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.

PENETRON INDUSTRIAL SELF-LEVELING TOPPING

CURING

Penetron Industrial Self-Leveling Topping is self curing. It is walkable in 3-4 hours @ 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 Penetron Industrial Self-Leveling Topping mixed with 4.5 qts (4.25 l) of clean mixing water will yield approximately 23 sq ft (2.1m²) of mixture @ 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) pea gravel per 50 lb (22.7 kg) bag of Penetron Industrial Self-Leveling Topping.

TECHNICAL DATA

All data has been derived from tests under laboratory conditions. (Field conditions may yield slightly different results.)

Mixing Water (per 50 lb (22.7 kg) bag):

4.5 quarts (4.25 liters)

Compressive Strength: (ASTM C 109):

1 day 2800 psi (22.1 MPa)

7 day 4300 psi (35.9 MPa)

28 day 6000 psi (44.8 Mpa)

Flexural Strength (ASTM C 348):

28 day 950 - 1000psi (6.6 - 6.9 MPa)

Cracking:

NONE through 28-day test

Tensile Bond Strength (28 day):

200 psi (1.4 MPa)

Type failure:

Bond

Working Time:

More than 30 minutes

Initial Set Time:

1 hr. 30 min.

Final Set Time:

1 hr. 23 min.

PACKAGING

Penetron Industrial Self-Leveling Topping is supplied in 50 lb (22.7 kg) kraft paper bags, reinforced with a polyethylene inner lining to ensure moisture resistance.

SUPPLEMENTAL INFORMATION

- ◆ Store In a dry environment.
- ◆ 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 USE on floors that will be exposed to acids (or their salts) or other materials that may seriously and/or rapidly attack Portland cement.
- ◆ DO NOT permit primed surfaces to become wet unless sealed.
- ◆ During application, protect topping from direct sunlight, wind, rain, snow and other forms of moisture.
- ◆ Consult Penetron when questionable conditions prevail or for additional information.

CAUTIONS

Risks:

- ◆ Eye irritant
- ◆ Skin irritant
- ◆ Lung irritant
- ◆ Causes burns
- ◆ May cause delayed lung injury

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.

First Aid: Wash exposed skin with soap and water. If breathing is difficult, move person to fresh air.

Waste Disposal Method: 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.

Additional Information: For additional information regarding personal protective equipment, first aid and emergency procedures, refer to the product Material Safety Data Sheets (MSDS).

KEEP OUT OF THE REACH OF CHILDREN.

WARRANTY

ICS PENETRON INTERNATIONAL LTD. warrants that the products manufactured by it shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion. Should any of the products be proven defective, the liability to ICS PENETRON INTERNATIONAL LTD. shall be limited to replacement of the material proven to be defective and shall in no case be liable otherwise or for incidental or consequential damages. ICS PENETRON INTERNATIONAL LTD. makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied. User shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.