

PENTENS TOP 1

Non-Metallic Floor Hardener

Product Data Sheet

Description

PENTENS TOP 1 is a ready-to-use, dry shake, non-metallic floor hardener composed of cement and hard aggregates of mineral origin. The particles used have been selected for their shape, grade and high physical and mechanical quality. PENTENS TOP 1's workability and cohesion makes it easy to apply as durable surface topping for fresh concrete and mortars.

Uses

PENTENS TOP 1 is suitable for floors subject to severe mechanical wear, e.g.

- Parking lots
- Engineering workshops
- Warehouses
- Quays
- Service stations / factories
- Garages
- Jetties
- Loading bays

Advantages

- Ultimate wear resistance and anti-impact feature.
- Ultimate adhesive strength.
- Non-rusting.
- Colour options.
- Low water permeability.
- Dense surface with added resistance against oil and grease.
- Improves skid resistance.

Technical & Physical Data

Form	Powder
Color	Natural Red Brown Light Green Dark Green
Mohs Scale Hardness (BS EN 15771:2010)	6
Compressive Strength (N/mm ²)	80
Abrasion Resistance (ASTM D4060-14)	<266.3
Weight Loss after 1000 cycles (mg)	
Typical Coverage	
Normal Traffic Area	4kg/m ²
Heavy Traffic Area	5-6kg/m ²
Application Temperature (°C)	10 to 40
Service Temperature (°C)	-30 to 200
Flexural Strength (N/mm ²)	>15
Water Impermeability	20% less permeable than untreated concrete
Shelf Life	1 year when unopened
Storage Condition	Store in a dry, cool place
Packaging	25kg /bag

Important Notes

1. The material must be stored indoor to avoid being exposed to direct sunlight, wind or rain.
2. On completion of construction, the curing period for foot traffic shall be at least 24 hour.

Instruction for Use

Site Concrete

The base concrete shall be Grade 25 or higher with a workable on-site slump, and the slump shall be determined by the engineers.

The base concrete should have an air content of less than 3% of structural grade and free from bleed water.

Application

Timing

Base concrete substrate must be fully compacted with a grade of 30N/mm³ and a site slump test of 75 to 100mm. Timing is critical after the leveling of concrete as the abrasion resistance may be affected. The base concrete shall be stiffened at an initial setting point where light foot traffic is allowed and does not leave a maximum of 5mm deep imprint. However, it should not be too late until the moisture within the concrete hydrates PENTENS TOP 1. Bleeding on the surface is to be avoided.

Shake-On Method

Uniformly broadcast approximately 60% of the material onto the fresh concrete. Wait until the color of PENTENS TOP 1 darkens by the absorption of the moisture from the base concrete. Lightly compact the material using a mechanical power floating machine, at a low speed to prepare the surface for the second application of PENTENS TOP 1. Do not overwork the surface at this stage.

The balance 40% of the material should be evenly broadcast from an opposite direction. Compact with mechanical power floating machine at a high speed until a dense finish is achieved.

Curing

Immediately after the final compacting, apply PENTENS CONC-CURE or protect with damp hessian to prevent rapid moisture loss. Polyethylene sheet must be used to protect the floor finish surface in case of rain.

Cleaning

Tools and equipment can be easily cleaned with water immediately after use.

Safety

PENTENS TOP 1 contains cement which is highly alkaline and may cause irritation to the skin. Impervious gloves and barrier cream should be used when handling these products. Eye protection should be worn. In case of contact with eyes, rinse with plenty of water and seek medical advice if symptoms persist. If contact with skin occurs, it must be removed before curing takes place. Wash off with an industrial skin cleanser followed by plenty of soap and water. Do not use solvent. Ensure adequate ventilation when using these products.