

PENTENS T-308 FLEX

Product Data Sheet

Flexible Crystalline Cementitious Waterproofing Compound

Description

PENTENS T-308 FLEX is a two-component, penetrating cementitious, reactive crystalline nano-capsule core self-healing technology waterproofing material. The active chemicals which react with moisture and free lime in the concrete or cement-based materials will cause a catalytic reaction that creates a non-soluble crystalline formation which crystallizes in the pores and capillary tracks.

At micro level, shrinkage cracks from drying might create passageways for moisture infiltration. If problem occurs while crystals are still forming, micro-cracks up to 0.4mm can be bridged. If problems occur later, the water will infiltrate water reactive proofing chemicals, allowing the concrete to heal itself on a micro scale.

PENTENS T-308 FLEX technology enhances the natural hydration process in concrete, increases compressive strength over time and dramatically reduces cracks caused by shrinkage. PENTENS T-308 FLEX has the characteristic of apply self-sealing in 24 hours.

PENTENS T-308 FLEX can be applied as a second coating to reinforce PENTENS T-308M Crystalline Cementitious Waterproofing Compound.

For damp proof areas, T-308 FLEX can be applied to the concrete surface.

Uses

PENTENS T-308 FLEX is used to waterproof areas as indicated below:

- Basement floors and retaining walls
- Concrete flat roofs
- Water retaining / excluding structures
- Underground vaults and foundation
- Bridges and tunnels
- Lift pits
- Swimming pools
- Potable water tanks
- Water tanks, reservoirs, sewage and water treatment plants
- Internal & external parking structures

Advantages

- Low VOC.
- Environmentally friendly.
- Self-healing.
- Apply to both positive and negative concrete surface.
- Resistance against positive and negative hydrostatic pressure.
- Permanently sealed against the penetration of water from any direction.
- Highly resistant to aggressive chemicals.
- Aid in sealing the capillaries and minor shrinkage cracks up to 0.4mm by crystal formation.
- Non-toxic.

Technical & Physical Data

Form	A: Milky Latex B: Cement Powder (grey)
Specific Gravity	2.0 at 20°C (mix)
Pencil Hardness (Gouge hardness)	2H
Impermeability of Concrete (mm) (DIN-1048-5 (1991))	
Experiment Group (Coated testing sample)	64.07
Control Group (Uncoated)	70.62
Chloride Ion Contents (%) CNS 147033 (2002)	0.0029
Adhesive Strength (kgf/cm ²) (ASTMD4541-09)	12.6
Salt Spray Resistance	300 hrs, no change
Workability	30 min at 30°C and shortened at higher temperatures
Potable Condition	Complied
Water Permeability (mL/m ³ . day) CNS 10757 (1995)	493.93
Microstructural Analysis (SEM)	25mm
Packaging	10kg /pail (A) 25kg /bag (B)
Can Seal Hairline Cracks	Up to 0.4mm

Disclaimer. All representations and recommendations set forth are given in good faith and to the best of our knowledge. However due to varying conditions and applications, the buyer shall conduct its own tests of this product before use. Under no circumstances will the manufacturer be liable for any loss or damages caused by incorrect usages. The sale of this product shall be on terms and conditions set forth on Pentens order acknowledgement.

Important Notes

1. Minimum ambient and substrate temperature is 5°C.
2. Do not apply to a dry substrate.

Instruction for Use

Surface Preparation

Precise and efficient surface preparation is essential to achieve the high adhesive qualities of PENTENS T-308 FLEX:

1. Concrete surfaces to be treated must be sound, clean, free from oil, grease and surface contaminants. All loose materials and surface laitance must be removed. Surfaces must have an "open" capillary system to ensure adhesion and to allow the chemicals to penetrate. If the surface is too smooth, the concrete must be roughened by sandblasting, water blasting or other suitable mechanical methods.
2. Surfaces should not contain curing agents or hardeners prior to the application of PENTENS T-308 FLEX. Rout out and repair all cracks larger than 0.4mm in width.
3. Ensure all concrete surfaces are thoroughly rinsed with clean water as moisture must be present in the capillaries prior to applying PENTENS T-308 FLEX.

Application

Mix PENTENS T-308 FLEX Part A and Part B thoroughly with a slow speed drill equipped with a paddle. Do not mix excessive materials that could not be finished in 20 minutes. If mixture thickens, re-stir to reduce consistency. Do not add extra water. Use brush or roller (synthetic bristle) to apply PENTENS T-308 FLEX slurry coat at a rate of 0.80kg/m² per coat. Be sure to work slurry coat well into openings, rough surfaces, joints and routed out areas.

Apply second coat at a rate of 0.50 to 0.60kg/m² if required, after the first coat has taken an initial set (usually within 1 hour). If the first coat has dried out, moist the surface before applying the second coat.

The use of PENTENS T-308 FLEX shall be supervised adequately. For further advice, please contact PENTENS Technical Representative.

Safety

PENTENS T-308 FLEX contains cement and is alkaline. Suitable precautions should be taken to minimise direct contact with skin. Wear gloves and goggles when using the material. In case of contact with eyes, rinse with clean water and seek medical advice if symptoms persist.

PENTENS



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