

# PENTENS E-502

## Epoxy Silica Mortar Floor

### Product Data Sheet

#### Description

PENTENS E-502 is a two-component mortar consisting of modified epoxy resin mixed with pigments (A-Comp.), polyamine hardener (B-Comp.) and graded aggregates.

PENTENS E-502 is designed specifically for industrial use.

#### Uses

PENTENS E-502 is suitable for levelling and repairing standard to highly absorbent concrete and cement screed surface prior to the application of epoxy. PENTENS E-502 is particularly suitable for the preparation of epoxy mortar.

- High mechanical wear
- Traffic zones
- Floor slabs
- Loading / unloading quays
- Suspended floors
- Storage and logistic areas
- Car parks
- Factory floor
- Institutional areas
- Wet and dry processing areas
- Warehouses

#### Advantages

- Solvent-free.
- Excellent wear and impact resistant properties.
- Impervious to liquids and excellent resistance against chemicals.
- Easy application.
- High strength.
- Varying degree of anti-skid finishing available.
- Seamless finishing.
- Superb adhesive strength.
- Low viscosity.
- Good penetration.
- High mechanical strength.
- Short waiting time.
- Moisture barrier.

#### Technical & Physical Data

Form	Liquid
Colour	Transparent
Density (CNS 6986, CNS 6988)	1.08kg /litre
Flexural Strength (N/mm <sup>2</sup> ) (ASTM C 580)	50
Tensile Strength (N/mm <sup>2</sup> ) (ASTM C307)	30
Elongation at Break (%) (ASTM D638)	9
Compressive Strength (ASTM C 579 : 93)	> 90N/mm <sup>2</sup>
Abrasion Resistant CS-17 (ASTM D 4060)	Less than 30 mg weight loss after 1000 cycles of abrasion.
Tensile Adhesion (Pull-out-Strength) (ASTM D 4541)	3.5 N/mm <sup>2</sup> Failure in concrete
Pot Life (30°C)	20 minutes
Shelf Life	1 year when unopened and undamaged
Storage Condition	Store in a dry, cool place
Packaging	
■ E-502 A	20kg /pail
■ E-502 B	5kg /pail

#### Chemical Resistant

Citric Acid 10%	Excellent
Tartaric Acid 10%	Excellent
Acetic Acid 5%	Good
Fuel / Petrol	Excellent
Sugar Solution	Excellent
Hydrochloric Acid 25%	Excellent
Lactic Acid 10%	Very Good
Phosphoric Acid 50%	Very Good
Sodium Hydroxide 50%	Excellent

#### Important Notes

1. Minimum ambient and substrate temperature is 5°C.
2. Apply only to dry and clean surfaces.

## Instruction for Use

### Surface Preparation

All surfaces must be clean, free from grease, oil, laitance, dirt and contaminants which might affect adhesion.

The substrate should be level, preferably slightly rough and dry enough to allow the product to soak in. If the thickness of the epoxy silica mortar floor is less than 4mm, the concrete must not contain over 4% moisture and typically 28 days of concrete cure is required. The thickness of the epoxy silica floor is highly dependent on the substrate's moisture content.

### Mixing

PENTENS E-502 A/B must be mixed homogeneously prior to application, using an electrical or pneumatic power stirrer at approximately 300 – 400 rpm. (mixing time is minimum 3-4 minutes but depending on the circumstances, it may take longer until a homogeneous mix is achieved.)

### Application

Mix A-Comp. and B-Comp. of epoxy primer until a homogeneous substance is achieved. Apply with brush or roller.

Mix A and B Component of PENTENS E-502 Epoxy Silica Mortar until a homogeneous substance is achieved, then add graded aggregates slowly while mixing continuously using a mechanical mixer.

Distribute the mortar screed onto the wet primer and trowel the mortar screed to the required thickness. The material should be pressed with a wooden float to ensure complete compaction, followed by a steel trowel to achieved an even texture. Screed rods are useful for maintaining a minimum compacted thickness.

## Specifications for Mix Recommendation

### Epoxy Mortar Base (4mm - 4.5mm/m<sup>2</sup>)

E-502	1 kg
Silica sand	8 kg

### Pure Screed Mortar (5mm/m<sup>2</sup>)

E-502	7.5 kg
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### Curving (75mm H/mr)

E-502	0.2kg
Silica sand	1.6 kg

### Curing

- Foot traffic after 6 hours.
- Full mechanical and chemical resistance is achieved after 7 days.

### Cleaning

Tools and equipment can be easily removed with thinner immediately after use. Hardened material can only be removed mechanically.

### Safety

Impervious gloves and barrier cream should be used when handling these products. Eye protection should be worn. In case of contact with eyes, rinse immediately with plenty of clean 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 and avoid inhaling the vapor.