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PUFFIN EPOXY EPOCHEMIX

A 3 part, epoxy modified cementitious, usage for fine textured mortar for self-smoothing floor screeds in thin layers of 1.5 to 3 mm, as a Temporary Moisture Barrier (TMB) (min. 2 mm thick) allowing the application of Epoxy, Polyurethane and PMMA* resin floors requiring dry substrates, over high moisture content substrates, even green concrete, for a lasting solution. And a self-smoothing screed for: Levelling or patching horizontal concrete surfaces, in new work or repairs, in aggressive chemical environments ▪ Floor topping on non-ventilated damp substrates without particular aesthetic requirements ▪ Levelling layer under Epoxy, Polyurethane and PMMA* floor coatings / screeds, tiles, sheet floors, carpets or wooden floors ▪ Repair and maintenance of monolithic and vacuum concrete floor.

1. Properties

COLOR	Grey natural
GLOSS LEVEL	Matts (10-30)

b. Appearance and colour

Puffin epoxy Epochemix base. A - resin: White liquid

Puffin epoxy Epochemix base. B - hardener: Translucent yellow liquid

Puffin epoxy Epochemix base. C - filler: Natural grey aggregate powder Colour: Light grey

c. Density

Puffin epoxy Epochemix base. A: ~1.09 kg/L

Puffin epoxy Epochemix base. B: ~1.03 kg/L

Puffin epoxy Epochemix base. C: ~1.72 kg/L

(EN 1015-6) at +20 °C

2. TECHNICAL INFORMATION

Compressive strength

1 day ~15 N/mm²

7 days ~38 N/mm²

28 days ~44 N/mm² (EN 13892-2)

Tensile strength in flexure

28 days ~10 N/mm² (EN 13892-2)

Chemical resistance Puffin epoxy Epochemix product range has improved chemical resistance over plain concrete in aggressive environments, but is not designed as a chemical protection. For specific chemical resistance, always overcoat with a suitable product from Puffin floor coatings. For occasional exposure or spillages, consult technical department.



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3. Characteristics

A. Recommended

As a Temporary Moisture Barrier (TMB)

A self-smoothing screed for Repair and maintenance of monolithic and vacuum concrete floor

B. Advantage

- Can be overcoated with epoxy resin compounds after 24 hours (+20 °C, 75 % r.h.)
- Prevents osmotic blistering of resin-based coatings over damp substrates
 - Economical and fast, easy application
 - Good levelling properties
- Impervious to liquids but permeable to water vapour
- Frost and de-icing salt resistant
- Thermal expansion properties similar to concrete Excellent bond to green or hardened concrete whether damp or dry
- Excellent early and final mechanical strengths
- Excellent resistance to water and oils
- Ideal preparation for smooth surface finishes
- For internal use
- Contains no solvents
- Will not corrode reinforcement

C. SYSTEM INFORMATION

The system configuration as described must be fully complied with and may not be changed. Primer indicated below is suitable for each of these substrates: ▪ Green concrete (as soon as mechanical preparation is possible) ▪ Damp concrete (> 14 days old) ▪ Damp aged concrete (rising moisture) Patching and repair: Layer thickness: 3 – 9 mm Primer: Puffin epoxy water base Puffin epoxy Epochemix -Extended mortar mix. (See mixing for details) Levelling screed for medium substrate roughness: Layer thickness: 1.5 - 3 mm Primer: Puffin Epoxy Epochemix ® Systems Drying and Curing time:

D. APPLICATION INFORMATION

Mixing ratio Puffin epoxy Epochemix base. B: Puffin epoxy Epochemix base. C - packing size: 0,757: 1.173: 23,1kg Flooring Screed: At temperatures between +12 °C to +25 °C: 1 : 2.5 : 17 (by weight) Comp. (A+B): C = 3 kg: 22kg At temperatures between +8 °C to +12 °C and +25 °C to +30 °C: The amount of Puffin epoxy epochemix base c can be reduced to 18 kg in order to improve workability. Please note: Never reduce Comp.C by more than this amount. 1 : 2.5 : 21.5 (by weight) Comp. (A+B) : C = 4 kg : 18 kg Extended mortar mix. Repair mortar: To repair surface irregularities and holes 3 to 5 cm in diameter and deeper than 3 mm and up to 9 mm the standard Sikafloor®-81 EpoCem® ID mix can be extended with dry quartz sand. For each 23 kg unit of Sikafloor®-81 EpoCem® ID prepared as indicated below, add: ▪ Quartz sand 0.7 - 1.2 mm, 5 - 10 kg ▪ Quartz sand 2.0 - 3.0 mm, 5 - 10 kg Final mix will be : 33 - 43 kg For this application, to achieve a good bond of



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the mortar to the substrate, Puffin primer water base or puffin bonding agent must be used as bonding bridge. Apply

- E. Consumption Primer: Puffin epoxy epochemix 0.3 kg/m² Self smoothing screed: Puffin epoxy epochemix 2.25 kg/m²/mm These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage, etc. Layer thickness 1.5 mm min. / 3.0 mm max. If Puffin epoxy epochemix is used as a Temporary Moisture Barrier (TMB), a minimum of 2 mm must be applied. Ambient air temperature +10 °C min. / +30 °C max. Relative air humidity 20 % min. / 80 % max. Substrate temperature +10 °C min. / +30 °C max. Substrate moisture content Can be applied on green or damp concrete, without any standing water. Although the product can be applied onto green concrete surfaces (> 24 hours), it is advised to allow at least 3 days for early shrinkage of concrete to occur in order to prevent concrete shrinkage cracks from appearing on the screed surface. Pot Life Temperature / R.H 75% Time +10 °C ~40 min +20 °C ~20 min +30 °C ~15 min 23 kg units
- F. Curing time Once Puffin epoxy epochemix is tack free it is possible to apply vapour permeable seal coats. For the application of vapour tight coatings Puffin epoxy epochemix , allow the surface moisture to fall below 4 %, not earlier than: Substrate Temperature Waiting Time +10 °C ~2 d +20 °C ~1 d +30 °C ~1 d

4.

5. Product compatibility:

Depend on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product.

Some examples are shown below.

Previous:

Epoxy

Subsequent coat:

Epoxy, polyurethane, PMMA

6. Precaution

- a. Ensure to clean the surface before application.

- b. Health and safety:

Please observe the precautionary notices displayed on the container.

Use under well ventilated conditions. Do not inhale spray mist. Avoid skin contact.

Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

- c. Shelf life

Puffin epoxy epochemix base. A & base. B : 12 months

Puffin epoxy epochemix base. C : 9 months



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From date of production if stored in original, unopened and undamaged sealed packaging.

d. Storage conditions

e. The product must be stored in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +30 °C. Puffin epoxy epochemix

base. A & base. B : Protect from frost and direct sunlight Sikafloor®-81 Puffin epoxy epochemix base. C : Protect from humidity and direct sunlight

7. Packaging

Pre-batched 25 kg units Puffin epoxy epochemix base .A 0.757 kg tin plate pail Puffin epoxy epochemix base .B 1.173 kg tin plate gallon Puffin epoxy epochemix base c.C 23.1 kg plastic bag.