

Technical Datasheet

Envirodeck Bedding Mortar



Fast Setting Bedding Mortar

Description


A pre-packed polymer modified, rapid setting, fibre reinforced cementitious bedding mortar designed to give rapid strength development even under adverse conditions. The product contains a specially selected latex bonding and waterproofing gauging liquid. Envirodeck Bedding Mortar is designed to achieve and surpass the performance requirements of EN1504 Part 3 Class R3.

Advantages

- Pack contains bag and bottle of gauging liquid.
- Guaranteed low water/cement ratio.
- Can be laid in sections from 10mm to 30mm.
- Excellent adhesion to concrete.
- Contains no chloride containing additives.
- Aggregate is non-Alkali Silica reactive in accordance with ASTM C289.
- Excellent workability and finishing properties.
- Resistance to water, frost and salt permeation.

Applications

- Bedding of Envirokerb & other units
- Repair of damaged concrete both insitu and pre-cast.
- Repairs to damaged floors and roads.
- Screeding where rapid strength gain and/or water resistance is required.

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EN 1504—3 Concrete repair product for structural repair PCC Mortar (based on polymer modified hydraulic cement)	
Compressive strength	Class R3 (>25 MPa)
Chloride ion content	≤0.05%
Adhesive bond strength	>1.5 MPa
Adhesion after freeze/thaw (50 cycles with salt)	>1.5 MPa
Elastic modulus	>15GPa
Dangerous substrates	Complies with 5.4

Surface Preparation

Substrate must be clean and sound, hence all grease, oil, and dirt must be removed. Laitance should be removed by scarifying.

Technical Properties of Envirodeck Bedding Mortar

Properties	Standard	Performance Requirements	Declared Value
Appearance			Grey Powder & White Liquid
Chloride-ion Content	EN1015-17	≤ 0.05%	≤ 0.05%
Maximum Aggregate Size			4mm
Maximum water/cement ratio			0.4
Cement content			> 400 kg/m ³
Minimum Layer Thickness			10mm
Maximum Layer Thickness			30mm
Working time			20-30 Minutes
Temperature for application			5°C to 30°C
Density			2200-2300 kg/m ³
Compressive strength	EN12190	> 25 MPa	15 MPa @ 4 Hrs 33 MPa @ 24 Hrs 45 MPa @ 7 Days
Modulus of elasticity, in compression	EN13412	≥15 GPa	17.8 GPa
Tensile strength	BS6319-7		>4.0 MPa
Adhesion to concrete	EN1542	≥ 1.5 MPa	> 2.0 MPa
Adhesion after:	EN13687-1	≥ 1.5 MPa	> 2.0 MPa
freeze/thaw	EN13687 -2	≥ 1.5 MPa	> 2.0 MPa
thunder/shower	EN13687 -4	≥ 1.5 MPa	> 2.0 MPa
CO ₂ Diffusion coefficient			2.1 x 10 ⁻⁵ cm ² /sec
u value			7100
R value			140 m
Sc @ 20mm			350 mm
Sorptivity			0.01 mm min ^{-½}
Cl-Diffusion coefficient			1 x 10 ⁻¹⁰ cm ² /sec
Coefficient of thermal expansion	EN1770		7.8 x 10 ⁻⁶
Water permeability coefficient	28 days		<0.01 ml/m ² /sec
Carbonation resistance	EN13295	dk ≤ ref. Concrete	Passes
Capillary absorption	EN13057	≤ 0.5 kg/m ² /Hr0.5	≤ 0.5 kg/m ² /Hr0.5
Cracking tendency	Coutinho ring		No crack after 180 days

Technical data shown are statistical results and do not correspond to guaranteed minima.
Tolerances are those described in appropriate performance standards.

When applying over large area. For sections greater than 30mm please contact PDS technical department.

1 N/mm² = 1 MPa 1 kN/mm² = 1 GPa

Priming

Saturate the substrate and ensure all free standing water has been removed.

Where substrate is of poor quality the use of a primer may be required. Failure to dampen down the substrate will cause Envirodeck Primer to dry out too quickly. Mix the primer by adding the entire contents of the powder to the gauging liquid, mix into a slurry. Apply by brushing thoroughly into the prepared surface, including any exposed reinforcement. Envirodeck Bedding Mortar must be applied while the primer remains tacky. If the primer dries before the mortar is placed then the primer should be removed and the substrate re-primed.

Coverage of Envirodeck Primer is 2.5 - 3.5 m² per pack.

Mixing

Mix as per normal concrete, starting with two thirds of the gauging liquid to which the powder is added. The remainder of the gauging liquid can then be added to obtain the required consistency, ensuring the material is thoroughly mixed before use. A forced action pan mixer will ensure thorough mixing.

Application Instructions

Compact the mortar to ensure maximum durability and finish as required. All equipment should be cleaned immediately after use by washing with water.

Storage

Envirodeck Bedding Mortar has a shelf life of 12 months, when stored unopened at moderate temperatures. Protect from frost.

Packaging

Envirodeck Bedding Mortar is available in 25kg packs (yield 12.5 litres). Envirodeck

Primer 3.8kg pack

Health & Safety

Envirodeck Bedding Mortar does not present any undue hazard and is non-toxic, however, as it is alkaline, gloves should be worn and any material should be washed from the skin and eyes before it dries with clean water. The normal standards of hygiene should be observed and the use of a barrier cream is advisable.

Envirodeck Primer, like similar products, is capable of irritating unprotected skin, we therefore recommend the use of gloves and a barrier cream. Accidental skin contact should be removed using soap and water.

Limitations

Minimum application temperature is 5°C, if applying below 5°C please contact PDS technical department.

For bedding depths below 10mm and greater than 30mm, contact PDS technical department.

Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical representatives are available to provide further information and arrange demonstrations.

