

Estobond PCA

Thixotropic Epoxy Segmental Bridge Adhesive

Description

Estobond PCA is a two component, solvent free epoxy resin system consisting of a white resin and black hardener in pre-measured quantities for easy on-site mixing. **Estobond PCA** has been specially formulated to meet the requirements for bonding prefabricated concrete bridge segments.

Uses

Estobond PCA is used for bonding prefabricated concrete bridge segments to provide a structural and water-resistant joint. **Estobond PCA** is also suitable as a gap filling paste, grouting of starter bars, holding down bolts, etc., where a paste consistency material is required.

Advantages

- Excellent adhesion to concrete, steel and most construction materials.
- High strength, cures at low temperature to give high physical properties.
- Can be applied to dry or damp surfaces.
- Non-sag, easy to apply, non-slump product.
- Easy to mix.

Physical Properties

Colour of mixed material	Grey
Mix Density, kg/L	1.68 ± 0.02
Gel Time, min ASTM D2471-99 / FIP/9/2:1978, Clause 5.1	45 - 75
Open Time, min (FIP/9/2 March 1978, Clause 5.1, 5.2 and 5.14)	> 60
Shrinkage after 7 days, % FIP/9/2:1978, Clause 5.7	< 0.1
Heat Resistance, Deflection Temperature, °C ASTM D648-07 / FIP/9/2:1978, Clause 5.10	> 50.0
Compressive Strength, MPa FIP/9/2:1978, Clause 5.12 1 day 7 days	> 75 > 80
Modulus of Elasticity, GPa FIP/9/2:1978, Clause 5.13 Instantaneous & Deferred Modulus in Compression: 1 day 7 days	> 8.00 > 6.00
Tensile Bending Strength (MOR), MPa FIP/9/2:1978, Clause 5.14	Concrete failure / No evidence of epoxy bonding agent failure

Slant Shear Bond Strength, N/mm ² ASTM C882-12 / FIP/9/2:1978, Clause 5.15 7 days	> 30.0
Shear Modulus in Compression, GPa FIP/9/2:1978, Clause 5.16 Instantaneous Shear Modulus Deferred Shear Modulus	> 1.50 > 1.20

Application Instructions

Surface Preparation

All surfaces to be treated must be firm, dust-free and clean. All laitance should be removed mechanically.

The surface should be washed thoroughly with clean water and all traces of surface water removed.

Mixing

Estobond PCA is supplied in pre-measured quantities with a total volume of 4.5 litres. Add all the curing agent (black) to the white resin and mix thoroughly. Mixing should be continued until an even grey colour, free from streaks is obtained.

Application

The mixed adhesive may be applied by spatula. Serrated trowel or glove protected hand depending upon the size and shape of the job.

The mixed epoxy must be used within its specified pot life and all mating surfaces must be brought together within the contact time.

The **Estobond PCA** should be used immediately after mixing or the pot life can be prolonged by spreading the mixed adhesive into a thin layer (less than 20 mm). This will allow any exotherm to be dissipated.

Cleaning

All tools and equipment should be cleaned immediately after use. Hardened adhesive can only be removed mechanically.

Packing & Size

Estobond PCA	4.5 Liters / 7.6kg / pack
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Coverage

Estobond PCA	1 m ² /L at 1 mm thickness
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These figures are for guidance only. Actual coverage will depend on the texture and porosity of the surface being covered.

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Technical Support

Denka offers a comprehensive range of high performance, high quality of product for both new and existing concrete surfaces, in addition, the company offers a technical support package to specifiers, end-user and contractors, as well as on-site technical assistance.

Storage

Estobond PCA should be stored on pallets in cool and dry conditions. The product shelf life is of 12 months.

It shall be protected from high humidity and extreme heat.

Precaution

Contact with the skin must be avoided. Gloves and barrier cream should be used when handling these products. If contact with the resin occurs, the skin should be washed immediately with soap and water. Eye contamination must be immediately washed with copious quantities of water and medical treatment sought. Working areas should be well ventilated.

Additional Information

Denka Construction Solutions Malaysia Sdn Bhd offers a wide range of complementary products, which includes waterstops, waterproofing products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spalled concrete are available.



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