

## **Techno Proof bond**

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### **Acrylic polymer modified protective and decorative coating for concrete and masonry**

#### **Uses**

To protect atmospherically exposed reinforced concrete structures from attack by acid gases, chloride ions, oxygen and water. The product is also suitable to protect other cementitious substrates and masonry for new and existing structures. Typical applications include.

- Re-facing and reprofiling concrete & masonry surfaces
- Flexible coating to bridge shrinkage cracks
- Waterproof coating for water tanks and reservoirs

#### **Advantages**

- Excellent barrier to carbon dioxide, chloride ions and water.
- Allows water vapor to escape from the structure.
- Water proof - suitable for water retaining structures.
- High resistance to the effects of long-term weathering, durable in all climatic conditions including UV attack.
- Minimum surface preparation needed and low labour costs
- Non toxic - ideal for potable water tanks
- Flexible, with thermal expansion similar to concrete
- Covers honeycombed and pitted poured concrete effectively
- Good abrasion resistance

#### **Standards compliance**

Tested to: BS6920 (section 4.2.8 immersion test) ASTM C307

#### **Description**

Techno Proof bond comprises a two component acrylic polymer modified cementitious coating supplied in ready to mix kits. Techno Proof bond can be simply applied by stiff brush, roller, spray or trowel to obtain the desired texture.

#### **Design criteria**

The coating should be applied in two coats to achieve a total dry film thickness of not less than 2mm. Areas subjected to light foot traffic should receive minimum 2mm thickness and an additional 2mm coating should be applied to areas of moderate to heavy pedestrian conditions. To achieve the

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correct protective properties, Techno Proof bond must be applied on to the substrate at the coverage rates recommended.

### Properties

Pot life	:	1 hour @ 20°C 20 min @ 35°C	
Colors	:	grey and white, especial colors on request	
Application temp	:	not less than 5°C	
Toxicity	:	to BS6920 section 4.2.8 immersion test-negligible effect on potable water.	
Properties (cured)	:	Techno Proof bond	slurry coat*
Tensile strength (ASTM C307)	:	3.75 N/mm <sup>2</sup>	2.0 N/mm <sup>2</sup>
Flexural strength	:	11 N/mm <sup>2</sup>	4 N/mm <sup>2</sup>
Bond strength	:	1-0.65 N/mm <sup>2</sup>	0.35 N/mm <sup>2</sup>
Chloride ion resistance: 1 month (% Cl detected)		coated 0.0004	uncoated 0.0063
6 months (% Cl detected)		0.0004	0.0344
Moisture vapor Permeability flux G/m <sup>2</sup> /Day)	:	204	844
Carbonation resistance depth of penetration (mm):		1	7

\* A1:3 sand/cement slurry coat adjusted with water for same workability as mixed Techno Proof bond for brush application

### Specification

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Acrylic polymer modified protective/decorative coating.

The protective coating shall comprise specially selected cements, graded hardwearing aggregates and additives supplied in powder form together with a liquid component of blended acrylic co-polymers and wetting agents.

The total dry film thickness of the coating shall be not less than 2 mm and shall be capable of providing resistance to wear and weather and good chemical resistance to mild inorganic acid solution, diesel oil, gasoline, chlorides, de-icing salts, effluents and organic solvents.

It shall exhibit positive water pressure resistance up to 7 meters head, dependent on coating thickness.

### **Instructions for use**

#### **Preparation**

All surfaces should be dry and free from contamination such as oil, grease, loose particles, decayed matter, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit -blasting the surface.

Spalled and deeply disintegrated concrete should be removed to sound concrete and repaired with a M.T.C. repair system. For further advice, consult the local M.T.C. office.

It is essential that all surfaces to be treated be pre-soaked with clean water prior to application of Techno Proof bond

#### **Mixing**

Techno Proof bond liquid should be poured from the plastic container into the metal drum provided. For brush application consistency mix a slow speed drill.

The powder component should be added gradually to the liquid to avoid lump formation and mixed for 2 to 4 minutes.

Techno Proof bond should be immediately used after mixing. Do not mix more material than can be used within the pot life. Keep mixing Techno Proof bond during the application.

#### **Application**

Application of Techno Proof bond on hot substrates (i.e. 40°C surface temperature) will need the prior application of a primer coat. Mix Techno Proof bond and water in slurry like consistency and Apply Techno Proof bond over the primer

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whilst it is still wet.

For best results, surfaces should be damp. In order to obtain the protective properties of Techno proof bond, it is important that the correct rates of application are observed.

Use a short stiff brush (preferably 120 - 200mm width) and apply in one or two coats as required.

It is recommended that for general resurfacing each coat should be 1mm thick. Areas subjected to light foot traffic should receive at least 2mm thickness of Techno Proof bond and an additional 2mm should be applied if conditions are moderate to heavy pedestrian traffic.

### **Cleaning**

Techno Proof bond should be removed from tools and equipment with clean water immediately after use. Hardened material can be removed mechanically.

### **Estimating**

#### **Supply**

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Industrial kit	27 kg pack consisting of:
Powder	23kg bag
Liquid	4 kg pail

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#### **Coverage**

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Techno Proof bond	Theoretical 14:20m <sup>2</sup> @1mm thickness - Coverage figures given are theoretical, due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.
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