

# DATA Sheet



## CEMPROTEC ELASTIC

### USES

**CEMPROTEC ELASTIC** is a cementitious modified, polymer rich coating which maintains its elastomeric properties even under immersed conditions. It is ideally suited for waterproofing and protecting concrete and masonry structures which are exhibiting cracking where further movement is expected. Typical applications include treatment of water towers and tanks, roofs of reservoirs and surfaces in contact with potable water.

### ADVANTAGES

<b>SIMPLE:</b>	Materials are pre-packaged in a convenient and easy to handle size. Requires only mixing on site.
<b>EASY TO USE:</b>	Brush, trowel or spray applied, normally in two coats, to give an even finish.
<b>ADHESIVE:</b>	Excellent adhesion to sound, prepared concrete and masonry substrates.
<b>ELASTOMERIC:</b>	Maintains its elastomeric properties, even under immersed conditions, to accommodate movement in cracks.
<b>IMPERMEABLE:</b>	A 2mm thick coat is resistant to water at 10 bar positive pressure and exhibits low carbon dioxide diffusion.
<b>SAFE:</b>	Water-based product free from hazardous solvent. Non-toxic when cured.
<b>TOLERANT:</b>	Can be applied to damp substrates in temperatures down to 5°C.

### PRODUCT DESCRIPTION

**CEMPROTEC ELASTIC** is a two component, cementitious modified, polymer rich coating with excellent adhesion to prepared concrete and masonry substrates. When mixed it exhibits a good degree of thixotropy to enable ease of application by brush or spray techniques to give an even finish with no sagging even in vertical situations. It hydrates and chemically cross-links to form a hard, highly alkaline, permanently elastomeric coating which not only protects the concrete, or other substrates, from water penetration and carbon dioxide diffusion, but also accommodates movement in cracks.

### TECHNICAL DATA

<b>Basis:</b>	Cementitious modified, cross-linking acrylate / acrylonitrile copolymer.
<b>Mixed Colour:</b>	Concrete Grey & White.
<b>Mixed Density:</b>	1600kg/m <sup>3</sup> .
<b>Min. Application Temp:</b>	5°C.
<b>Max. Application Temp:</b>	35°C.
<b>Working Life:</b>	45 minutes at 20°C.
<b>Drying Time:</b>	4-6 hours depending upon temperature.
<b>No. of coats required:</b>	Normally two at 1mm thickness.

### MECHANICAL CHARACTERISTICS (TYPICAL)

**Compressive Strength:** BS 4551 Tested at 20°C.  
28 days 8-10N/mm<sup>2</sup>.

**Flexural Strength:** BS 4551 Tested at 20°C.  
28 days 3.5-4.0N/mm<sup>2</sup>.

**Tensile Strength:** 2mm film cured for 28 days.  
Ambient 0.5N/mm<sup>2</sup>.  
Immersed 0.4N/mm<sup>2</sup>.

**Bond Strength:**  
28 days 1.5-2.0N/mm<sup>2</sup>.

**Elongation:** 2mm film cured for 28 days.  
Ambient 120-130%.  
Immersed 70-80%.

**Static Crack Bridging:** Draft European Standard.  
Unreinforced 1.6mm at 23°C.  
1.4mm at -20°C.  
Reinforced 3.0mm at 23°C.

**Water Permeability Coefficient:** DIN 1048 Part 1  
5.37 x 10<sup>-16</sup> m/sec

i.e. 2mm **CEMPROTEC ELASTIC** = 2270mm of typical concrete.

**Oxygen Diffusion Coefficient:** Taywood Test  
Do<sub>2</sub> = 1.96 x 10<sup>-6</sup> cm<sup>2</sup>s<sup>-1</sup>.  
(Normal concrete: Do<sub>2</sub> = 2.12 x 10<sup>-3</sup> cm<sup>2</sup>s<sup>-1</sup>).

### APPLICATION DATA

**Application Guide available on request.**

### PREPARATION

The areas to be repaired must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Smooth surfaces should be roughened and all loose materials and surface laitance must be removed, preferably using wet grit or water blasting techniques or equivalent approved methods. The strength of the concrete sub-base should be a minimum of 20N/mm<sup>2</sup>.

### PRIMING

The prepared substrate should be thoroughly soaked (preferably 24 hours before) with clean water until uniformly saturated without any standing water. Highly porous substrates may require sealing with either **POLYMER ADMIXTURE 850** or **BONDING BRIDGE 842**.

### MIXING

Pour the contents of one of the bottles marked Part A into a suitable mixing vessel. Slowly add one of the packs marked Part B and mix for a minimum of 5 minutes until homogeneous. The modules must be mechanically mixed using a drill and paddle specially designed to entrap as little air as possible. Repeat with the second containers of Parts A and B provided.

## PLACING

**CEMPROTEC ELASTIC** should generally be applied using spray techniques. Brush or trowel applications may be employed although care must be taken to ensure that air is not entrapped into the surface. Apply the first coat, approximately 1mm thick, onto the prepared substrate. To ensure total protection, a second coat should be applied in the same way, after waiting approximately 4-6 hours - depending on temperature (when the first coat is stable but not fully set).

## CURING

Normal procedures relating to curing of cementitious products should be strictly adhered to. It is important that the surface of the coating is protected from strong sunlight and drying winds with **FLEXCRETE CURING MEMBRANE**, polythene sheeting, damp hessian or similar. Curing must commence within 10-15 minutes of the completed application of the coating.

## CLEANING

All tools should be cleaned with water immediately after use.

## SHELF LIFE

12 months in dry, frost free conditions with unopened containers at 20°C.

## PACKAGING AND COVERAGE

Pack Size:	25kg. Consisting of 2 x 12½kg composite packs.
Yield:	15.6 litres per 25kg pack.
Coverage:	1.6kg/mm/m <sup>2</sup> . Each 12½kg composite pack at 1mm thickness will cover 7.8m <sup>2</sup> .

## IMPORTANT NOTES

1. Apply only to clean, sound substrates which should be saturated but surface-dry and free of water back pressure.
2. Care should be taken when curing in hot, sunny or windy conditions.
3. **CEMPROTEC ELASTIC** is not a decorative finish and may temporarily discolour until uniformly weathered. It may, however, be overcoated with a specialist membrane in the Flexcrete Range.

## SAFETY DATA

**Safety Data Sheet available on request.**

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