Technical Data Sheet

CEMPROTEC ELASTIC

Elastomeric Cementitious Modified Flexible Coating

USES

CEMPROTEC ELASTIC is an elastomeric, cementitious modified, polymer-rich coating which maintains its flexibility under permanent immersion and when exposed externally. It is ideally suited for waterproofing and protecting concrete and masonry structures which exhibit cracking and where further movement is expected. Typical applications include the sealing of water tanks, waterproofing of exposed or buried roofs, and use as a crack isolation membrane on concrete floors or screeds. It is also ideal for embedding **CEMPROTEC 2000-S** reinforcing tape to form a flexible waterproof joint sealing system.

ADVANTAGES

- Pre-packaged materials only requiring mixing on site.
- Brush, trowel or spray applied, normally in two coats. Flooring applications are a one coat operation.
- Tough, flexible coating which maintains its elastomeric properties even under immersed conditions to accommodate movement in cracks.
- Good abrasion and very high resistance to freeze/thaw cycles and de-icing salts.
- Excellent adhesion to sound prepared concrete and masonry substrates as well as steel.
- Dense matrix offers low permeability to water, even at 10 bar pressure, and very high diffusion resistance to carbon dioxide gas.
- A 2mm coat provides the equivalent to 135mm of good quality concrete cover.
- Can be applied to damp substrates in temperatures down to 5°C.
- Water-based product, free from hazardous solvents, making it suitable for use in confined spaces. Non-toxic when cured.

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 to form a durable, 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. It is non-hazardous and ideally suited for application in confined spaces.

CE 0086

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EN1504-2: Surface Protection Systems
- Coating Protection Against Ingress (PIC)

Adhesive Bond:	≥ 0.8 MPa
Water Vapour Permeability:	Class I <5m
Permeability to CO_2:	Equivalent to 135mm of concrete
Thermal Compatibility EN13687-1:	> 0.8 MPa
Capillary Absorption:	Class III<0.1 $kg.m^{-2}.h^{-0.5}$
Dangerous Substances:	Complies with 5.4
Reaction to Fire:	Euroclass B-s1, d0
Cracking Bridging EN1062-7:	Class A5 > 2500µm

COMPLIANCE

CE marked in accordance with BS EN 1504 Part 2. WRAS Approved for use in contact with potable water.

MECHANICAL CHARACTERISTICS (TYPICAL)

Compressive Strength:	BS 4551 Tested at 20°C
28 days	8 - 10 MPa
Flexural Strength:	BS 4551 Tested at 20ºC
28 days	3.5 - 4.0 MPa
Tensile Strength:	2mm film cured for 28 days
Ambient	0.5 MPa
Immersed	0.4 MPa
Elongation:	2mm film cured for 28 days
Ambient	120 - 130%
Immersed	70 - 80%
Water Permeability Coefficient:	DIN 1048 Part 1
	5.37×10^{-16} m/sec
ie. 2mm **ELASTIC** = 2270mm typical concrete	
Oxygen Diffusion Coefficient:	BS EN1062-6 Taywood Test
	$Do_2 = 1.706 \times 10^{-5}\ cm^2s^{-1}$
(Normal concrete	$Do_2 = 2.2 \times 10^{-3}\ cm^2s^{-1}$)

APPLICATION DATA

Application Guide available on request.

PREPARATION

The areas to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Smooth surfaces should be cleaned to remove release agents, curing compounds and surface laitance, preferably using wet grit or water blasting techniques or equivalent approved methods, and any steel cleaned to bright metal. The concrete sub-base should be a minimum of 20N/mm².

PRIMING

The prepared substrate should be thoroughly soaked (preferably 24 hours before) with clean water until uniformly saturated without standing water. **CEMPROTEC EF PRIMER** should be used on floors & other horizontal areas, including localised cracks & movement joints where **CEMPROTEC 2000-S** reinforcing tape is to be embedded.

MIXING

Shake Part A (liquid) and pour into a suitable mixing vessel. Slowly add the Part B (powder) 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. Bottles of liquid and bags of powder are **not** to be split.

PLACING

CEMPROTEC ELASTIC is applied by brush or trowel over smaller areas, taking care to ensure that air is not entrapped into the surface. Over larger areas, spray techniques are recommended. 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). On horizontal deck applications, apply as a single 2mm layer, spreading with a skid leveller or notched trowel, and immediately use a spiked roller to release entrapped air.

IMPORTANT NOTES:

1. Apply only to clean, sound substrates which should be saturated but surface-dry & 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.

REINFORCEMENT

Over expansion joints and other critical movement areas, **CEMPROTEC ELASTIC** may require reinforcing with either **CEMPROTEC 2000-S,** elastomeric waterproof tape, or **CEMPROTEC SCRIM.** When embedding the reinforcing tape, press the fabric into a freshly applied 1mm coat and leave to become stable. Finish with a second 1mm coat if using as a localised joint or crack sealing system. See separate technical data sheet for **CEMPROTEC 2000-S** for further information.

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 WB**, polythene sheeting, damp hessian or similar. Alternatively, **CEMPROTEC EF GRIT** can be broadcast into the surface (approximately 2kg/m²) taking care to ensure that the full depth of the coating is not penetrated, to provide effective curing whilst also creating a more abrasion and slip resistant finish. Curing must commence within 10-15 minutes of the completed application.

TECHNICAL DATA

Mixed Colour:	Grey & White	Min Application Temp.:	5ºC
Mixed Density:	1600 kg/m³	Max Application Temp.:	35°C
No. of coats required:	Two at 1mm for overhead & vertical applications, one at 2mm on floors.	Working Life (Approx.):	45 minutes at 20°C
Drying Time:	4-6 hours depending upon temp.	Finishing Time:	Within 10 minutes of placing.

PACKAGING AND COVERAGE

Pack Size:	Grey - 30kg composite	White - 15kg composite (2 x 7.5kg)
Yield:	18.8 litres per 30kg pack (Grey)	9.4 litres per 15kg pack (White)
Coverage:	1.6 kg/mm/m²	

On repaired and normal concrete surfaces, a 30kg pack at 2mm thickness will cover 9.4m². If embedding **CEMPROTEC 2000-S**, a 15 kg pack will embed 58 metres of 120mm width tape and 39 metres of 200mm width tape at 1mm thickness. When using **CEMPROTEC 2000-S** as a localised joint system, a second coat at 1mm should be applied to finish.

CLEANING

All tools should be cleaned with water immediately after use.

SHELF LIFE

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

SAFETY DATA

Safety Data Sheet available on request.

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