

Polymer Modified Cementitious Coating

FORMERLY FLEXCRETE CEMPROTEC ELASTIC

PRODUCT DESCRIPTION

A two component, water-based (VOC-free), polymer modified cementitious waterproofing product which cures to form a durable, highly alkaline, permanently elastomeric coating.

INTENDED USES

Specifically designed for the protection of concrete and other mineral substrates from water penetration and carbon dioxide diffusion. It also accommodates movement in cracks.

Intercrete 4842 can be used for sealing of water tanks and waterproofing of exposed, buried or green roofs and may be used as a crack isolation membrane on concrete floors and screeds.

CE-marked in accordance with BS EN 1504-2. Suitable for surface protection systems principles 1.3, 2.2, 8.2 as defined in BS EN 1504-2.

PRACTICAL INFORMATION FOR INTERCRETE 4842

Colour	Grey
Volume Solids	100%
Density	1600kg/m ³ (100lb/ft ³)
Typical Thickness	2000 microns (80 mils) dry film thickness
Practical Coverage	Typically 9.4m ² at 2000 microns (80 mils) dry film thickness per 30kg supplied. Practical coverage will depend upon the porosity of the area being treated and appropriate losses must be taken into consideration.
Method of Application	Airless Spray, Trowel, Brush, Skid Leveller
Shelf Life	24 months at 20°C (68°F).
Pack Size	30kg composite packs
Working Pot Life	20°C (68°F) 45 minutes

Drying Time Temperature	Overcoating interval with self			
	Touch Dry	Hard Dry	Minimum	Maximum
20°C (68°F)	5 hours	24 hours	4 hours	7 days

COMPLIANCE AND CERTIFICATION

When used as part of an approved scheme, this material has the following certification:

- Suitable for surface protection systems principles 1.3, 2.2, 8.2 as defined in BS EN 1504-2.



Protective Coatings

Polymer Modified Cementitious Coating

SPECIFICATION CLAUSE

The structural waterproofing coating shall be a two component, thixotropic, polymer modified cementitious coating. It shall be CE-marked in accordance with BS EN 1504-2, and shall comply with the following performance specification:

- Impermeable to water under 10 bar hydrostatic pressure such that a 2.0mm coating is equivalent to 2270mm of concrete.
- Oxygen diffusion resistance coefficient of at least 1.706×10^{-5} cm²/sec in accordance with BS EN 1062-6.
- Elongation of at least 120% in ambient conditions and 70% immersed (2.0mm film cured for 28 days).

The roof coating shall be a two component, thixotropic, polymer modified, cementitious coating. It shall be CE-marked in accordance with BS EN 1504-2, and shall comply with the following performance specification:

- Impermeable to water under 10 bar hydrostatic pressure such that a 2.0mm coating is equivalent to 2270mm of concrete.
- Elongation of at least 120% in ambient conditions and 70% immersed (2.0mm film cured for 28 days).
- Tensile strength of at least 0.5MPa in ambient conditions and 0.4MPa immersed (2.0mm film cured for 28 days).
- Barrier to root penetration in accordance with Lupin Root Resistance Test TS 14416:2005.

SURFACE PREPARATION

Concrete

Concrete should have a minimum strength of 20MPa. All surfaces should be clean and free from laitance, curing compounds, release agents, efflorescence, grease, oil, dirt, organic growth, old coatings and loose or disintegrating concrete. Smooth surfaces should be roughened, using high pressure water jetting or similar techniques. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

APPLICATION

Mixing

Intercrete 4842 is supplied in two parts; a liquid component (Part A) and a powder component (Part B). MIX FULL UNITS ONLY. Shake Part A thoroughly and pour into a suitable mixing container, then slowly add Part B and mix for a minimum of 5 minutes until homogeneous, without any lumps. Mixing should be carried out using a slow-speed drill and paddle, designed to entrap as little air as possible.

Airless Spray

Recommended

Tip size 1.25 mm (49 thou)
Total output fluid pressure at spray tip not less than 189 kg/cm² (2690 p.s.i.)

Brush

Recommended

See Product Characteristics

Trowel

Recommended

See Product Characteristics

Work Stoppages / Clean Up

Do not allow material to remain in hoses, guns or spray equipment. Thoroughly flush all equipment with clean water.

Clean all equipment immediately after use with clean water. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.

All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

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PRODUCT CHARACTERISTICS

Concrete Substrates

Do not use when the temperature is below 5°C (41°F) and falling. Avoid application in rain, direct sunlight or strong wind. For high temperature working refer to the application guidelines. Do not use Intercrete 4842 on waterproof concrete without referring to Protective Coatings Technical Department. Not suitable for use on trafficked areas.

Placing

Intercrete 4842 is ideally suited to brush application, although spray techniques should be used in large areas. Care should be taken to ensure that air is not entrapped onto the surface. Apply the first coat, approximately 1mm thick, onto the prepared substrate. If required, embed suitable textile reinforcement. 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 a single 2mm layer with a skid leveller or notched trowel and immediately release entrapped air with a spiked roller.

Reinforcement

Over expansion or formed joints and other critical movement areas, Intercrete 4842 may require reinforcing with Intercrete 4872. Embed the reinforcement in a 1mm layer of Intercrete 4841 or 4840, pressing the fabric into the freshly applied material and leave to become stable. Finish with a 1mm coat of Intercrete 4842 if using as a localised joint or crack sealing system. Refer to relevant product data sheet for further information. A suitable textile reinforcement should be used over surfaces exhibiting general cracking or where movement in the substrate is expected. Contact International Protective Coatings for further information.

Curing

Normal concreting procedures should be strictly adhered to. It is important that the surface of the mortar is protected from strong sunlight and drying winds with Intercrete 4870, polythene sheeting, damp hessian or similar (see separate Data Sheet for full details). In floor and deck applications, curing MUST commence within 10-15 minutes of the completed application of the coating.

CE mark applies to products manufactured at Tomlinson Road, Leyland, PR25 2DY England, under reference 2797-CPR-530942.

APPLICATION TIPS

- Regularly check coating thickness during application using the wet film thickness gauge available from AkzoNobel.
- Apply Intercrete 4870 curing membrane as an even, fine mist spray. Do not over-apply or allow to pond on the surface or cracking may occur.
- Intercrete 4842 is not a decorative coating and may dry with a patchy appearance until uniformly weathered. It may be overcoated with Intercrete membranes to give a coloured finish.
- Over heavily cracked areas or where greater tensile strength is needed, i.e. on roof applications, Intercrete 4842 is reinforced with a thermally bonded geotextile, which is embedded in the first 1mm coat.
- In cold, humid conditions, condensation may form on surfaces treated with Intercrete 4842, resulting in darkening of finish and retardation of set.
- Intercrete 4842 skins readily, however through-curing progresses at a slower rate. Ensure that the coating is through-cured before returning to service. Allow to cure for a minimum of 7 days before immersion.
- On horizontal/deck/podium applications, use protection boards following application to prevent damage to the applied material. If the application is being covered with pavements, etc., use a sand bed or pedestals.
- When applying by airless spray, add a maximum of 0.5 litres of clean water per 30kg unit to improve finish.
- Cold Weather Working (See separate Guide): $\geq 3^{\circ}\text{C}$ (37°F) on a rising thermometer, $\geq 5^{\circ}\text{C}$ (41°F) on a falling thermometer.
- Hot Weather Working (See separate Guide): Store material in cool conditions to maximise working life.

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TECHNICAL DATA / MECHANICAL CHARACTERISTICS

Standard and Property	BS EN 1504-2 Requirement	Result
EN 1542 Adhesive Bond	$\geq 0.8\text{MPa}$ Crack bridging flexible systems without trafficking	0.89MPa
EN13687-1 Thermal Compatibility	$\geq 0.8\text{MPa}$ Crack bridging flexible systems without trafficking	0.88MPa
DIN1048 Water Permeability Coefficient (Equivalent Concrete Thickness)		$5.37 \times 10^{-16}\text{m/sec}$ 2mm = 2270mm of concrete
EN 13501-1 Reaction to Fire	Euroclass	Euroclass B2 – s1, d0
DIN 1048 Resistance to Water Pressure		10 bar (100m hydrostatic head) positive and negative
BS 903-A2 Tensile Strength		Ambient 0.5MPa Immersed 0.4MPa
EN 1062-3 Liquid Water Transmission Rate (Capillary Absorption and Permeability to Liquid water)	Class III (low) $w < 0.1\text{kg.m}^{-2}.\text{h}^{-0.5}$	$w = 0.0086 \text{kg.m}^{-2}.\text{h}^{-0.5}$
EN 1062-6 Permeability to CO_2	$R \geq 50\text{m}$	57m 2mm equivalent to 135mm of concrete
BS EN 7783-2 Water Vapour Permeability (Equivalent Air Layer Thickness)	Class 1 $S_D \leq 5\text{m}$	$S_D = 1.55\text{m}$
EN 1062-7 Static Crack Bridging	Declared Class	Class A5 $\geq 2500\mu\text{m}$
EN 1062-7 Dynamic Crack Bridging	Declared Class	Class B4.1 0.2 - 0.5mm
BS 903-A2 Elongation at Break		Ambient $\geq 120\%$ Immersed $\geq 70\%$
DD CENT/TS 14416 Root Resistance		Barrier to Root Penetration (Lupin Test)

Note: The properties given above are obtained from laboratory tests: results obtained from on-site testing may vary according to site conditions.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Safety Data Sheet and the container(s), and should not be used without reference to the Safety Data Sheet (SDS).

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

Important Note

The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.

This Technical Data Sheet is available on our website at www.international-marine.com or www.international-pc.com, and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.

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