Intercrete® 4803

Structural Repair Mortar

FORMERLY FLEXCRETE MONOLITE

PRODUCT DESCRIPTION

A single component, water-based (VOC free), polymer modified, fibre reinforced, low density cementitious repair mortar. The thixotropic nature of the product enables easy high build hand and trowel application for the repair of voids and the rendering and re-profiling of vertical, horizontal and overhead surfaces.

INTENDED USES

Specifically designed for the non-structural repair and reinstatement of concrete, brick or stone substrates, Intercrete 4803 is a low density, lightweight, fibre reinforced, polymer modified shrinkage compensated mortar. It exhibits high bond strength exceeding the tensile strength of concrete, ensuring monolithic performance of the repair. Can be applied up to 100mm (4 inches) in a single layer in vertical, horizontal and overhead situations.

CE-marked in accordance with BS EN 1504-3, Class R2. Suitable for repair methods 3.1, 7.1, 7.2 as defined in BS EN 1504-3.

PRACTICAL INFORMATION FOR INTERCRETE 4803

Volume Solids	100%
Density	1250kg/m³ (78lb/ft³)
Typical Thickness	5mm - 100mm (0.2 - 4 inches) dry
Practical Coverage	An 18kg bag as supplied covers approximately 1.67m² at 10mm (4 inches) thickness
Method of Application	Float, Trowel
Shelf Life	12 months at 20°C (68°F).
Pack Size	18kg bag
Working Pot Life	20°C (68°F) 60 minutes; 40°C (104°F) 30 minutes

Drying Time			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
20°C (68°F)	5 hours	7 hours	Not applicable	Not applicable

COMPLIANCE AND CERTIFICATION

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

- CE-marked in accordance with BS EN 1504-3, Class R2.
- Suitable for repair methods 3.1, 7.1, 7.2 as defined in BS EN 1504-3.
- Compliant with Highways Agency Standard BD27/86 for the repair of Highway Structures
- Compliant with LU Standard 1-085 ‘Fire Safety Performance of Materials’.

CE 0086

CRA

FM 41091 EMS 597530 OHS 597351

Quality Environmental Health & Safety

SPECIFICATION CLAUSE

The repair mortar shall be a single component cementitious mortar, incorporating microsilica, fibre and styrene acrylic copolymer technology. It shall be CE-marked in accordance with BS EN 1504-3 Class R2, and shall comply with the following performance specification:

- 5-100mm application thickness in a single layer, even overhead.
- Compressive strength at 20ºC (68ºF) of at least 13MPa in 1 day and 30MPa in 28 days.
- Flexural strength at 28 days (20ºC, 65% RH) of at least 5.68MPa in accordance with EN 196-1.

SURFACE PREPARATION

Concrete

Mechanically remove all damaged concrete back to sound, intact material. It is recommended that any steel reinforcement present be exposed to at least 25mm (1.0 inch) behind the bars and 50mm (2.0 inches) beyond the point at which corrosion is visible. The perimeter of the repair area should be stepped to a depth of 10mm (0.4 inches) using a saw, disc or power chisel. Feather edges must be avoided. The preferred methods of surface preparation are wet grit or water blasting techniques. 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. The strength of the concrete sub-base should be a minimum of 20MPa. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

Steel Reinforcement

Reinforcement should be cleaned, preferably by the use of wet grit blasting to remove any loose rust or scale, back to a ISO8501-1 Sa2½ (SSPC SP10). Alternatively, shot, water or equivalent blast cleaning techniques may be used. If chlorides are absent from the concrete or environmental constraints preclude the use of blast cleaning, hand held power tools capable of achieving ISO8501 St 2 or St 3 (SSPC SP2 or SSPC SP3). All exposed steel reinforcement should be treated with 2 x 1mm (40 mils) coats of Intercrete 4871, applied by brush (see relevant Product Data Sheet for full details). Note; when carrying out repairs in new construction, it is not necessary to fully expose any reinforcing bars.

APPLICATION

Mixing

Intercrete 4803 should be mechanically mixed using a forced action pan mixer or in a clean drum using a drill and paddle. A normal concrete mixer is NOT suitable.

Trowel

Recommended Float application is also recommended.

Work Stoppages / Clean Up

Clean all equipment immediately after use with clean water.

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

PRODUCT CHARACTERISTICS

Concrete
Do not use when the temperature is below 5˚C (41˚F) and falling. Do not use Intercrete 4803 on waterproof concrete without referring to the Protective Coatings Technical Department.

Priming
Intercrete 4803 is highly polymer-modified and as a result, concrete surfaces do not generally need a primer. Highly porous substrates should be primed with the appropriate Intercrete bonding system prior to the application of the repair mortars; contact Protective Coatings Technical Department for further information.

Placing
Intercrete 4803 can be applied by float or trowel as a render, resulting in application thicknesses of 100mm, even in soffit situations. If necessary, support with shuttering to allow for compaction if working to reveals, etc. The application thickness achievable is dependent upon the substrate and care must be taken to ensure that an initial thickness of Intercrete 4803 is well placed and adhered before building up to larger depths.

For repairs which require multi-layer applications, it is important to ensure that previous layers are well keyed and stable but not fully set (2-6 hours dependent on temperature) prior to the application of subsequent layers. No inter-layer priming is required. Final profiling of a high quality is easily achieved with a steel float.

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).

CE mark applies to products manufactured at Tomlinson Road, Leyland, PR25 2DY England, under reference 0086-CPD-530942.

APPLICATION TIPS

- For multi-layer application, use the fingers of a gloved hand to stipple the surface of the first layer.
- DO NOT wet out or prime between layers.
- If the mortar thickens, remix but DO NOT add extra water.
- DO NOT over-trowel. If the mortar begins to slump, allow to stabilise and refinish.
- When finishing, trowel from the centre out towards the perimeter, working into the edges of the repair.
- For structural repairs, use Intercrete 4800 and for areas subject to vehicular traffic, use Intercrete 4801.
- Cold Weather Working (See separate Guide): ≥3°C (37ºF) on a rising thermometer, ≥5°C (41ºF) on a falling thermometer.
- Hot Weather Working (See separate Guide): Store material in cool conditions to maximise working life. Shade applied material from strong sunlight. Spray-apply a second coat of Intercrete 4870. If possible, avoid extreme temperatures by working at night.

TECHNICAL DATA / MECHANICAL CHARACTERISTICS

Standard and Property	BS EN 1504-2 Requirement	Result
EN 12190 Compressive Strength	>= 15 MPa	28 days: 27.6 MPa
BS4551 Compressive Strength Development @ 20°C		1 day : 13.0 MPa 7 days: 24.5 MPa 28 days: 30.0 MPa
EN 1542 Adhesive Bond (concrete)	>= 0.80 MPa	1.59 MPa Class R3 >=1.5 MPa
EN 1015-17 Chloride Ion Content	<= 0.05%	<= 0.05%
EN 13412 Elastic Modulus	No Requirement	11.5 GPa
EN 13057 Capillary Absorption	<= 0.5 $kg/m^{-2}/h^{-05}$	0.082 $kg/m^{-2}/h^{-05}$
EN 13687-1 Freeze/Thaw Cycling	>= 0.80 MPa	1.56 MPa Class R3 >= 1.5 MPa
Taywood Test: Water Permeability Coefficient (Equivalent Concrete Thickness)		4.86×10^{-14}m/sec 8.7mm of Intercrete 4803 = 1000mm of concrete
EN196-1 Flexural Strength		5.68 MPa
BS EN 12617-4 Shrinkage		0.061% after 7 days
EN 13501-1 Reaction to Fire	Euroclass	Euroclass A2 – s1, d0

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.

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