

Structural Repair Mortar

FORMERLY FLEXCRETE TIEFILL

PRODUCT DESCRIPTION

A single component, water-based (VOC free), polymer modified, fibre reinforced, Portland cement based repair compound which exhibits unique hydraulic properties to produce a rapid setting curing mortar with enhanced polymer properties.

Intercrete 4807 is ideally suited for the filling of voids, particularly in new construction, which needs to be rapidly put into service, such as tieholes, grout holes and voids around fixings.

INTENDED USES

Specifically designed for the filling of tieholes formed by formwork bolts in new construction, particularly where a rapid setting, durable, waterproof mortar is required. Can also be used for sealing grout holes and voids around fixings in pre-cast elements.

Intercrete 4807 sets in 30 minutes at 20°C (68°F), yielding a durable, high strength mortar which provides a waterproof seal which withstands 10 bar water pressure after only 72 hours curing. Non-toxic when cured and WRAS approved for use in contact with potable water.

CE-marked in accordance with BS EN 1504-3, Class R4. Suitable for repair methods 3.1, 7.1, 7.2 as defined in BS EN 1504-3.

PRACTICAL INFORMATION FOR INTERCRETE 4807

Volume Solids	100%			
Density	2150kg/m ³ (134lb/ft ³)			
Typical Thickness	5mm - 75mm (0.2 - 3.0 inches) dry			
Practical Coverage	An 8kg pack covers 0.4m ² at 10mm (4 inches) thickness. Practical coverage will depend upon the surface profile and porosity of the area being coated and appropriate losses must be taken into consideration.			
Method of Application	Trowel			
Shelf Life	12 months at 20°C (68°F).			
Pack Size	8kg bucket			
Working Pot Life	20°C (68°F) 20 minutes			
Drying Time	Overcoating interval with self			
Temperature	Touch Dry	Hard Dry	<i>Minimum</i>	<i>Maximum</i>
20°C (68°F) ¹	1	1	1	1

¹ 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 R4.
- Suitable for repair methods 3.1, 7.1, 7.2 as defined in BS EN 1504-3.
- WRAS approved for use in contact with water
- Conforms to the requirements of Regulation 31 (4) (b) Products with small surface area contact with water.
- Compliant with Highways Agency Standard BD27/86 for the repair of Highway Structures
- Compliant with LU Standard 1-085 'Fire Safety Performance of Materials'



Protective Coatings

Structural Repair Mortar

SPECIFICATION CLAUSE

The repair compound shall be a single component, polymer modified, fibre reinforced, Portland cement based repair compound. It shall be CE-marked in accordance with BS EN 1504-3 Class R4, and shall comply with the following performance specification:

- Ability to set in 10 minutes at 20°C (68°F), achieving a compressive strength of at least 8.5MPa in 1 hour and 55MPa in 28 days.
- Impermeable to water under 10 bar hydrostatic pressure such that an 8.75mm coating is equivalent to 100mm of concrete.

SURFACE PREPARATION

Concrete

The areas to be treated must be free from all unsound material, dust, oil, grease, corrosion by-products and organic growth. Smooth surfaces should be roughened, all loose material and surface laitance removed using wet grit blasting techniques, but for smaller areas needle gunning or bush hammering is effective. The strength of the concrete sub-base should be a minimum of 20MPa.

For the treatment of tie-holes formed by through-ties, any remaining plastic tube should be cut back and removed to approximately 40-50mm (1.5-2.0 inches) from the concrete face. Additionally, to eliminate the possibility of water tracking around the plastic tube, it should be plugged with a proprietary stopper. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

APPLICATION

Mixing

Mix sufficient Intercrete 4807 to use within the working life of the material. Using the mixing scoop provided, proportion the material using the initial guide Intercrete 4807:water ratio of 6:1 by volume or 9.4:1 by weight. Thus, an 8kg pack requires 850ml of clean water. Always add powder to water. Small quantities, i.e. less than 2kg, can be mixed by hand. Larger quantities should be mechanically mixed in a clean drum using a slow speed drill and paddle.

A normal concrete mixer is NOT suitable. Mix together thoroughly for 2-3 minutes to produce a cohesive thixotropic mortar. If necessary, the consistency can be adjusted by the minimum addition of extra powder or water. Use without delay.

Trowel

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.

Structural Repair Mortar

PRODUCT

Concrete

CHARACTERISTICS

Do not use when the temperature is below 5°C (41°F) and falling. Do not use Intercrete 4807 on waterproof concrete without referring to the Protective Coatings Technical department. Not suitable for use on trafficked areas

Placing

For normal applications, Intercrete 4807 should be compacted, using a placing technique to remove entrapped air, in layers not exceeding 75mm (3.0 inches) deep. For repairs which require multi-layer applications, it is important to ensure that previous layers are well keyed and stable but not fully set (30-45 minutes dependent on temperature) prior to the application of subsequent layers.

When the colour and surface texture of the surrounding concrete has to be matched, the final 15-25mm (0.75-1.0 inch) layer should be filled with Intercrete 4808. Consult the relevant Data Sheet for further information. Final profiling of a high quality can be easily achieved with a clean, dampened 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).

Rapid Tie Bolt System

Tie Rod Cover (mm)	Tie Rod Size (mm)	Typical Number of Holes	
		8kg Pack (4 litres)	6:1 Scoop Mix (235cc)
38	15	90	5
50	15	74	4
75	15	57	3

Through Tie Type

30	25	229	13
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CE mark applies to products manufactured at Tomlinson Road, Leyland, PR25 2DY England, under reference 0086-CPD-530942.

APPLICATION TIPS

- Take care if using very cold mixing water as this will accelerate setting of Intercrete 4807.
- DO NOT wet out or prime between layers.
- 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.
- Intercrete 4807 is particularly suited to cold weather use but should not be applied to frozen substrates.
- 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.

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TECHNICAL DATA / MECHANICAL CHARACTERISTICS

Standard and Property	BS EN 1504-2 Requirement	Result
EN 12190 Compressive Strength	>= 45 MPa (Class II)	28 days: 50.2 MPa
BS4551 Compressive Strength Development @ 20°C		1 Hour : 8.5 MPa 2 Hours : 15.0 MPa 4 Hours : 25.0 MPa 1 day : 34.0 MPa 7 days: 51.0 MPa 28 days: 55.0 MPa
EN 1542 Adhesive Bond (concrete)	>= 2.00 MPa (Class 4)	2.35 MPa
EN 13412 Elastic Modulus	>= 20.0 GPa	20.0 GPa
EN 13057 Capillary Absorption	<= 0.5 kg/m ² /h ⁰⁵	0.1 kg/m ² /h ⁰⁵
EN 13687-1 Freeze/Thaw Cycling	>= 2.00 MPa	2.25 MPa
Taywood Test: Water Permeability Coefficient (Equivalent Concrete Thickness)		1.62 x 10 ⁻¹² m/sec 8.75mm of Intercrete 4807 = 1000mm of concrete
EN196-1 Flexural Strength		10.50 MPa
EN13687-1 Thermal Capability Part 1	>= 2.00 MPa	2.25 MPa
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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