

## Structural Repair Mortar

### FORMERLY FLEXCRETE MONOPOUR PG

#### PRODUCT DESCRIPTION

A single component, water-based (VOC free), high performance, polymer modified, non-shrink cementitious formulation. Intercrete 4805 is a flowing grout with a maximum aggregate size of 2.5mm (100mils) for application thicknesses up to 100mm (~4 inches).

#### INTENDED USES

Specifically designed for the structural repair of large areas of concrete and heavy duty applications beneath base plates, plinths and stanchion bases where a pourable or flowable material is required.

Intercrete 4805 utilises a dual expansion mechanism which compensates for shrinkage in the plastic and hardened state and cures rapidly to give high early and long term strength development, enabling quick reinstatement. The dense matrix provides excellent protection from the ingress of acid gases, moisture and chlorides.

#### PRACTICAL INFORMATION FOR INTERCRETE 4805

<b>Volume Solids</b>	100%
<b>Density</b>	2275kg/m <sup>3</sup> (142lb/ft <sup>3</sup> )
<b>Typical Thickness</b>	Minimum 10mm (400mils) to maximum 100mm (~4 inches)
<b>Theoretical Coverage</b>	On prepared surfaces, a 25kg pack will cover approximately 1.2-1.25m <sup>2</sup> at 10mm thickness
<b>Practical Coverage</b>	Practical coverage will depend upon the surface profile and porosity of the area being coated and appropriate losses must be taken into consideration
<b>Method of Application</b>	Pour, Trowel
<b>Pack Size</b>	25kg packs
<b>Working Pot Life</b>	40°C (104°F) 30 minutes

**Drying Time** Overcoating interval with self

Temperature	Touch Dry	Hard Dry	Minimum	Maximum
20°C (68°F) <sup>1</sup>	1	1	1	1

<sup>1</sup> Not applicable

#### COMPLIANCE AND CERTIFICATION

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

- Compliant with Highways Agency Standard BD27/86 for the repair of Highway Structures



## Protective Coatings

## Structural Repair Mortar

### SPECIFICATION CLAUSE

The repair mortar shall be a free-flowing, polymer-modified, shrinkage-compensated, waterproof cementitious repair mortar. It shall be fully compliant with Highways Agency Standard BD 27/86 for the repair of High Structures and shall comply with the following performance specification:

- Bond strength after 28 days of >50MPa/mm<sup>2</sup> in accordance with BS 6319 Part 4.
- Compressive strength at 20°C (68°F) of at least 15MPa at 1 day and 60MPa at 28 days.

### SURFACE PREPARATION

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#### 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. On cutting back, feather edges must be avoided. The perimeter of the repair area should be stepped to a depth of 10mm by means of saw, disc cutting or preferably using a power chisel.

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.

The faces of formwork should be treated with a proprietary form release agent.

#### Steel Reinforcement

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.

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### APPLICATION

#### Mixing

Intercrete 4805 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. See Product Characteristics for further information on water quantities required.

Measure out the required water content for the selected consistency and pour  $\frac{3}{4}$  into the mixing vessel. With the mixer running, slowly add a full bag of powder and mix for a minimum of 1 minute before adding the remaining water. Continue mixing for a further 2-3 minutes, making sure that a smooth, even consistency is achieved. Mix so as to entrain as little air as possible. Pass the mixed material through a suitable coarse metal screen to remove any lumps or contaminants prior to placing. Place within the working life of the product and throw away any material remaining after this period. It is essential that these mixing instructions are strictly adhered to, otherwise significantly lower levels of performance or possible failure will result.

#### 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 4805 on waterproof concrete without referring to the Protective Coatings Technical Department.

### Mixing

Consistency on Mixing	Intercrete 4805 (litres/25kg)
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Trowellable	2.5
Flowable	3.2
Fluid	3.5

### Placing

The area to be filled should be shuttered and a header box used to maintain a head of 150-200mm (~7½ - 8 inches) throughout the pour. Continuous grout pour is essential. Ensure sufficient material is available prior to starting and that subsequent mixes are carefully sequenced. Pouring should be done from one side only, to avoid the entrapment of air or standing water. Large volumes of Intercrete 4805 may be pumped.

### 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).

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### APPLICATION TIPS

- Care should be taken when cutting out repairs to ensure that the shape is such that air cannot be trapped during the pouring operation.
- DO NOT wet out or prime between layers.
- Can be mixed to produce a trowellable consistency.
- When finishing, trowel from the centre out towards the perimeter, working into the edges of the repair.
- 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. 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
BS4551 Compressive Strength Development @ 20°C		1 day : 15-20 MPa 7 days: 47-52 MPa 28 days: 60-65 MPa
EN196-1 Flexural Strength		28 days: 7-9 MPa
EN 1542 Adhesive Bond (concrete)	>= 2.00 MPa	> 2.53 MPa
BS 6319-4 Bond Strength (Slant Shear Method)		60 MPa at 28 days
Electrical Resistivity (4-Point Wenner Probe)		11700-14000 O/cm Suitable for use with CP Systems
ASTM C827 Expansion		1-4% measured in the plastic state
EN12350-7 Air Content		2.0-3.5%
EN480-4 Bleed		0%
EN1062-3 Capillary Absorption		0.15 kg/m <sup>2</sup> h <sup>0.5</sup>
EN13395-2 Linear Flow 1000mm Trough		5 mins 1000mm 30 mins >= 800mm

**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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