

Structural Repair Mortar

FORMERLY FLEXCRETE UNIMATCH

PRODUCT DESCRIPTION

A single component, water-based (VOC free), cosmetic grade, polymer modified cementitious mortar suitable for the repair of damaged, honeycombed or spalled concrete. Intercrete 4808 is highly waterproof and exhibits good build characteristics which can be used in vertical, overhead and other difficult areas of repair without the need for primers or supports. Colour and texture matching is easily achieved by mixing Grey and White grades at different ratios using trial mixes. Coloured aggregates and concrete pigments can also be blended in.

INTENDED USES

Specifically designed for rapid cosmetic repairs to in-situ and pre-cast concrete where repairs need to be colour matched to the parent concrete to provide a highly aesthetic finish.

Intercrete 4808 demonstrates rapid strength development, achieving over 9MPa in 2 hours. Ultimate physical properties of cured materials are similar to base concrete. Not suitable for repairs deeper than 25mm (1.0 inch).

CE-marked in accordance with BS EN 1504-3 Class R1. Suitable for repair methods 3.1 as defined by BS EN 1504-3.

PRACTICAL INFORMATION FOR INTERCRETE 4808

Volume Solids	100%
Density	2100kg/m ³ (131lb/ft ³)
Typical Thickness	5mm - 25mm (0.2 - 1.0 inch) dry
Practical Coverage	A 25kg bag will cover 1.35m ² at 10mm 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	25kg packs
Working Pot Life	20°C (68°F) 5 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 R1.
- Suitable for repair methods 3.1 as defined by BS EN 1504-3.



Protective Coatings

Structural Repair Mortar

SPECIFICATION CLAUSE

The repair mortar shall be a single component, cosmetic grade repair mortar, incorporating polymer technology. It shall be CE-marked in accordance with BS EN 1504-3 Class R1, and shall comply with the following performance specification:

- Suitable for use in vertical and overhead areas without the need for primers, special lightweight aggregates or support.
- Compressive strength at 20°C. of at least 9MPa in 2 hours and 41.5MPa in 28 days.
- Flexural strength at 28 days (20°C. & 65% R.H) of at least 6.5 MPa in accordance with EN196-1.

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. 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.

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 and reinforcement cleaned to bright steel (ISO8501-1 Sa2½ / SSPC SP10) using wet grit blasting techniques or equivalent approved methods. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

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.

APPLICATION

Mixing

Intercrete 4808 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. Mix Intercrete 4808 with clean water in the ratio of 12% by weight or 5 - 6 parts to 1 water by volume. Mix only sufficient material for use within the working life of the material. Adding powder to water ensures easy hand mixing of small quantities to produce a smooth mortar consistency. Do not attempt to re-mix by the addition of more water after the initial mixing process is completed.

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 4808 on waterproof concrete without referring to the Protective Coatings Technical department. Not suitable for use on trafficked areas

Priming

Intercrete 4808 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

For small repairs and the initial layer (25mm maximum [1.0 inch]) of deep repairs, use Intercrete 4808 mortars as supplied to ensure maximum bond and protection. Trowel the mortar firmly into place on the dampened surface, completely covering any exposed steel. Allow to stiffen for 4-5 minutes (dependent upon temperature and water content) before working the surface with a clean, damp trowel which enables the repair to be trimmed, arrises cut and a final profile of a high quality achieved.

The required texture can be easily obtained with either a steel spatula or a polystyrene block. Do not "wet down" the patch repair during this period. For larger repairs (above 25mm [1.0 inch]), use the layer technique (25mm [1.0 inch] maximum per layer) to minimise heat generation. Score the surface of each layer lightly and allow to cure for 25-30 minutes before lightly damping down and applying subsequent layers. The addition of aggregates, up to 50% by weight, in subsequent layers will give economy and strength without affecting the monolithic state of the repair

Should temporary shuttering or other specialised applications be necessary, then please contact the Technical Department.

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 2797-CPR-530942.

APPLICATION TIPS

- Experiment with blends of Grey and White to provide a colour match before undertaking repairs.
- Coloured aggregates and concrete pigments can also be used to colour match where blends of Grey and White are unacceptable.
- DO NOT wet out or prime between layers.
- For deeper repairs after placement of the initial 25mm (1.0 inch) as supplied, Intercrete 4808 can be bulked out with aggregates to give economy and strength without affecting the monolithic state of the repair
- 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.
- Due to the rapid set of Intercrete 4808, only mix as much material to use within the working life of the material.
- 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.

Structural Repair Mortar

TECHNICAL DATA / MECHANICAL CHARACTERISTICS

Standard and Property	BS EN 1504-2 Requirement	Result
EN 12190 Compressive Strength	≥ 10 MPa (Class II) at 28 days	42.0 MPa (Grey) 48.0 MPa (White)
BS4551 Compressive Strength Development @ 20°C (Grey)		2 hours : 15.0 MPa 1 day : 20.0 MPa 7 days: 28.0 MPa 28 days: 41.5 MPa
BS4551 Compressive Strength Development @ 20°C (White)		2 Hours : 9.0 MPa 1 day : 23.5 MPa 7 days: 37.0 MPa 28 days: 41.5 MPa
EN 1542 Adhesive Bond (concrete)	≥ 0.80 MPa	1.15 MPa (Grey) Class R2 ≥ 0.8 MPa 1.98 MPa (White) Class R3 ≥ 1.5 MPa
EN 1015-17 Chloride Ion Content	$\geq 0.05\%$	$\geq 0.05\%$
EN196-1 Flexural Strength		6.5 MPa (Grey) 8.0 MPa (White)
BS EN1770 Coefficient of Thermal Expansion	Declared Value	$1.67 \times 10^{-5} \text{C}^{-1}$ (Grey) $1.36 \times 10^{-5} \text{C}^{-1}$ (White)
BS 1882: Part 5 Water Permeability		10 minutes : zero 2 hours: zero
EN 13501-1 Reaction to Fire	Euroclass	Euroclass F

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.

Copyright © AkzoNobel, 15/04/2019.

All trademarks mentioned in this publication are owned by, or licensed to, the AkzoNobel group of companies.

www.international-pc.com