



UNIMATCH

Colour Matched Rapid Structural Repairs

USES

For rapid structural repairs to in-situ and precast concrete. It is especially suitable for repairs which need to be matched to the parent concrete to provide a high aesthetic finish.

ADVANTAGES

- Pre-packaged material requiring mixing with clean water on-site. No special primers are necessary.
- Supplied in Grey and White grades which can be blended easily for perfect colour match. Coloured aggregates can also be blended in, as well as concrete pigments if necessary.
- Physical properties of cured materials similar to base concrete.
- Low shrinkage and high bond strength ensure monolithic performance of the repair.
- Polymer modified to enhance adhesion with low permeability giving excellent protection from acid gases, moisture ingress and chlorides.
- Rapid strength development, achieving over 9 MPa in 2 hours.
- Very low alkali content ensures low hazard in use and negligible risk of alkali silica reactions. Chloride-free.

PRODUCT DESCRIPTION

UNIMATCH is a single component, structural grade repair mortar, based on the latest polymer cement technology, which is suitable for the repair of damaged, honeycombed or spalled concrete. It is highly waterproof and exhibits good build characteristics. It can be used in vertical, overhead and other difficult areas of repair without the use of primers, special lightweight aggregates or support.

Colour and texture match is easily achieved by mixing grades of Grey and White at different ratios using trial mixes. If necessary, coloured aggregates can also be blended in, as well as concrete pigments.

APPLICATION DATA

Application Guide available on request.

PREPARATION

Mechanically remove all damaged concrete back to a sound core. Wherever possible the full circumference of the steel reinforcement should be exposed and should, if necessary, extend along the length of the corroding bar for at least 50mm 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 repaired must be free from all unsound material, i.e. 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. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

PRIMING

UNIMATCH is highly polymer modified and as a result concrete surfaces do not generally require a primer. Two coats of **STEEL REINFORCEMENT PROTECTOR 841** should be applied to the prepared steel by brush. For further information, please refer to relevant data sheets.

TECHNICAL DATA

Mixed Colour:	Grey or White
Mixed Density:	2100 kg/m ³
Max Application Thickness:	25mm
Min Application Temperature:	5°C
Max Application Temperature:	35°C
Working Life (Approx):	5-10 minutes at 20°C

MECHANICAL CHARACTERISTICS (TYPICAL)

	GREY	WHITE
Compressive Strength at 20°C:		
2 hours	15 MPa	9 MPa
24 hours	20 MPa	23.5 MPa
7 days	28 MPa	37.0 MPa
28 days	41.5 MPa	50.0 MPa
Flexural Strength:	BS 4551 20°C and 65% R.H.	
	11 MPa	10MPa
Bond Strength:	BS 6319: Part 4	
	Slant Shear Method:	
28 days	29.2 MPa	32.0 MPa
Water Permeability:	BS 1881: Part 5	
10 mins	Zero	Zero
2 hours	Zero	Zero

MIXING

UNIMATCH should be mechanically mixed using a forced action pan mixer or in a clean drum using a slow speed drill and paddle. A normal mixer is **NOT** suitable.

Mix **UNIMATCH** 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.

PLACING

For small repairs and the initial layer (25mm maximum) of deep repairs, use **UNIMATCH** 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), use the layer technique (25mm 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 by using **FLEXCRETE CURING MEMBRANE**, polythene sheeting, damp hessian or similar.

CLEANING

All tools should be cleaned with water immediately after use.

SHELF LIFE

6 months in dry, frost free conditions with unopened bags at 20°C.

PACKAGING AND COVERAGE

Pack Size: 25kg
Yield: 13.5 litres per 25kg pack
Coverage: A 25kg pack will cover 1.35m² at 10mm thickness

SAFETY DATA

Safety Data Sheet available on request.



Flexcrete Technologies Limited

Tomlinson Road

Leyland

Lancashire

PR25 2DY

United Kingdom

Tel: +44 (0) 845 260 7005

Fax: +44 (0) 845 260 7006

Email: info@flexcrete.com

Web: www.flexcrete.com

