

Confil Mortar

General Purpose Polyester Mortar

Description


An extremely versatile two component general purpose polyester mortar which exhibits a very fast set and rapid strength gain surpassing the average strength of concrete within 1 hour. Ideal for small general repairs where the rapid set allows the minimum of disruption. Confil Mortar is designed to comply with the requirements of EN1504 Part 3 Class R3.

Advantages

- Rapid curing, high early compressive, flexural & tensile strengths
- Pre-weighed for easy mixing
- Supplied in polythene tubs, which act as mixing vessels
- Excellent chemical & water resistance
- Less than 1% shrinkage
- Simple to use
- Will cure down to 0°C
- No primer required
- Available in two grades, Standard & Rapid Set

Applications

- Repairs to damaged precast units
- Repairs to spalled concrete roads, runways, goods yards, etc
- Fixing or bedding of copings & kerbs
- Bedding & raising of manhole frames
- Jointing between precast units
- Repairs to stair treads & joint arrises

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Nufins, Kingston House, 3 Walton Road, Pattinson North, District 15, Washington, Tyne & Wear. NE38 8QA 23 0086-CPR-774186	
EN 1504-3 Concrete repair product for structural repair PC Mortar (Polymer mortar)	
Compressive strength	Class R3 (≥25 MPa)
Chloride ion content	<0.05%
Adhesive bond strength	≥1.5 MPa
Adhesion after freeze/thaw	≥1.5 MPa
Elastic modulus	≥15 GPa
Dangerous substances	Complies with 5.4

Typical Usable Life

Temperature	Rapid Grade	Standard Grade
	Fast-set (minutes)	Slow-set (minutes)
10°C	30	50
15°C	22	40
20°C	18	30



Technical properties of Confil Mortar

Properties	Standard	Performance Requirements	Declared Value
Appearance			Grey Resinous Mortar
Chloride-ion content	EN 1015-17	≤0.05 %	<0.05 %
Aggregate size			Max. 1 mm
Layer thickness - minimum maximum			5 mm 15 mm
Working time (@ 23°C)			18-30 minutes
Hardening time (@ 23°C)			20-40 minutes
Density			2120 kg/m ³
Temperature for application			0°C to 35°C*
Compressive strength @ 23°C	EN 12190	≥25 MPa	80 MPa @ 2 hours 85 MPa @ 4 hours 98 MPa @ 24 hours 102 MPa @ 3 days 105 MPa @ 7 days
Compressive strength @ 7°C	EN 12190		80 MPa @ 4 hours 95 MPa @ 24 hours 98 MPa @ 3 days 100 MPa @ 7 days
Tensile strength	BS 6319-7		≥12.0 MPa
Flexural strength	BS 6319-3		≥20 MPa
Modulus of elasticity in flexure	BS 6319-3		≥15 GPa
Modulus of elasticity in compression	EN 13412	≥15 GPa	15 GPa
Adhesion - concrete	EN 1542	≥1.5 MPa	≥2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	EN 13687-1	≥1.5 MPa	≥2.0 MPa
Adhesion after thunder showers (30 cycles)	EN 13687-2	≥1.5 MPa	≥2.0 MPa
Adhesion after dry cycling (30 cycles)	EN 13687-4	≥1.5 MPa	≥2.0 MPa
Skid resistance	EN 13036-4		Class 1
Carbonation resistance	EN 13295	$d_k \leq \text{ref. concrete}$	$d_k < \text{ref. concrete}$
Capillary absorption	EN 13057	≤0.5 kg/m ² .h ^{0.5}	≤0.5 kg/m ² .h ^{0.5}
Cracking tendency	Coutinho ring test		No cracking after 180 days

Technical data shown are statistical results and do not correspond to guaranteed minima.

Tolerances are those described in appropriate performance standards.

All testing was conducted at 23°C under laboratory conditions, unless otherwise stated.

*Consult with the technical department when being used at below 5°C.

Once Confil Mortar has fully cured no shrinkage will occur.

Surface Preparation

All surfaces should be sound, clean, dry, free from oil, grease, chemical contamination and loose material. Concrete surfaces should be free from laitance, this should be removed by scarifying or vigorous wire-brushing. On smooth surfaces, a higher bond will result if the substrate is roughened to produce a mechanical key.

A stronger repair will result if the perimeter edges of defects are cut square with a chisel, angle grinder or similar tool.

Mixing

Care should be taken not to mix more material than can be used within the setting time of the material. In low temperatures it is important to precondition the material in a warm environment and if possible, to warm the substrate prior to application.

25kg packs; remove both tins of Confil resin and both bags of the sand/catalyst from the outer tub; the tub may be used for mixing. Mix in the ratio 1 tin of resin to 1 bag of sand/catalyst. Always add sand/catalyst to the liquid.

Half-pack mixing; pour all of the resin from 1 tin into the mixing vessel and whilst continuously mixing with a high-torque slow speed drill and appropriate 80mm paddle, gradually add the entire contents from 1 bag of sand/catalyst. Mix for 2-3 minutes until a homogenous trowellable mortar is achieved.

Full-pack mixing; pour both tins of resin into the mixer drum of a suitable forced action or pan type paddle mixer and whilst the drum is rotating, gradually add the entire contents of both bags of sand/catalyst. Mix for 2-3 minutes until a homogenous trowellable mortar is achieved.

Application Instructions

If formwork is used a suitable silicone or wax based release agent should be used to avoid the sticking of the mortar.

Working quickly, Confil Mortar should be pressed firmly into place to ensure good adhesion and full compaction, using a wood or plastic float. Finishing and closing the surface is assisted by wiping the float face clean with a rag dampened with Nuwash.

A maximum 15mm thickness is recommended per application and should not be exceeded. Where a multiple application build up is required, intermediate surfaces should be heavily scored and roughened to provide a mechanical key. Subsequent applications are made once the previous application has hardened and sufficiently cooled.

Clean all tools and equipment immediately after use with Nuwash.

Packaging

Confil Mortar is available in 25kg units (yield approximately 11.7 litres).

Storage

Confil resin is flammable (flash point is 31°C), due precautions should be made when handling and storing this material.

The shelf life is 6 months when stored unopened in dry, normal conditions and away from direct sunlight. Protect from frost.

Health and Safety

Product Safety Data Sheets (SDS) are available from Nufins. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the very latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

Limitations

For use below 5°C consult Nufins technical department.

Disclaimer

The information contained herein is to the best of our knowledge true and accurate and is given in good faith but without warranty. The user will be deemed to have satisfied themselves independently as to the suitability of our products for their own particular purpose. In no event shall Nufins be liable for consequential or incidental damages.

Users must always refer to the most recent issue of the Technical Datasheets, copies of which will be supplied on request.

Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Our technical contacts are available to provide further information and arrange demonstrations