

## 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

- Quick curing, high early compressive, flexural and tensile strength
- Pre-weighed for ease of mixing
- Supplied in polythene buckets, which act as mixing vessels
- Excellent chemical and water resistance
- Less than 1% shrinkage
- Simple to use
- Will cure down to 0°C
- No primer required
- Available in two grades standard and rapid set

#### Applications

- Repairs to damaged precast units
- Repairs to spalled concrete roads, runways, etc
- Fixing or bedding of copings and kerbs
- Bedding and raising of manhole frames
- Jointing between precast units.
- Repairs to stair treads and arises

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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 Fast-set	Standard Grade Slow-set
10°C	30 Minutes	50 Minutes
15°C	22 Minutes	40 Minutes
20°C	18 Minutes	30 Minutes



## Technical properties of Confil Mortar.

Properties	Standard	Performance Requirement	Declared Value
Appearance			Grey Resinous Mortar
Chloride-ion content	EN1015-17	≤0.05%	<0.05%
Aggregate size			Max. 1mm
Layer thickness - Minimum Maximum			5mm 15mm
Working time (@ 23°C)			18-30 minutes
Hardening Time (@ 23°C)			20-40 Minutes
Density			2120 kg/m <sup>3</sup>
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		- MPa @ 2 Hours 80 MPa @ 4 Hours 95 MPa @ 24 Hours 98 MPa @ 3 Days 100 MPa @ 7 Days
Tensile Strength	BS6319-7		≥ 12.0 MPa
Flexural Strength	BS6319-3		≥ 20 MPa
Modulus of Elasticity, in Flexure	BS6319-3		≥ 15 GPa
Modulus of Elasticity, in Compression	EN13412	≥ 15 GPa	15 GPa
Adhesion - concrete	EN1542	≥ 1.5 MPa	≥ 2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	EN13687-1	≥ 1.5 MPa	≥ 2.0 MPa
Adhesion after thunder showers (30 cycles)	EN13687-2	≥ 1.5 MPa	≥ 2.0 MPa
Adhesion after dry cycling (30 cycles)	EN13687-4	≥ 1.5 MPa	≥ 2.0 MPa
Skid Resistance	EN13036-4		Class 1
Carbonation resistance	EN13295	$d_k \leq \text{ref. concrete}$	$d_k < \text{ref. concrete}$
Capillary absorption	EN13057	$\leq 0.5 \text{ kg/m}^2/\text{h}^{-0.5}$	$\leq 0.5 \text{ kg/m}^2/\text{h}^{-0.5}$
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.

\*- 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 clean, dry free from oil, grease, chemical contamination and all loose materials. Oil and grease should be removed using Desolve. Concrete surfaces should be free from laitance, this should be removed by scarifying or etching with Chemclean. After using Chemclean, and after the reaction has ceased, wash the surface thoroughly with water and allow to dry. On smooth surfaces a stronger bond will result if the substrate is roughened to produce a mechanical key.

## Mixing

Remove the tin(s) of Confil Resin and the bag(s) of hardener/aggregate contained within the plastic mixing bucket. Pour the required amount of resin into the mixing bucket and add the hardener/aggregate slowly with continuous mixing until a trowellable consistency is achieved. Large quantities should be mixed in a suitable forced action or pan type paddle mixer.

Care should be taken not to mix more than can be used within the setting time of the material.

## Application Instructions

If formwork is used a suitable silicone or wax based release agent should be used to avoid the sticking of the mortar. The mixed Confil mortar should be trowelled firmly into place to ensure good adhesion, on dense substrates the mix should be made more resin rich to ensure good adhesion. A smooth surface can be obtained by keeping the face of the float clean by wiping with a cloth dampened with Nuwash.

It is recommended that the maximum thickness of 15mm per application should not be exceeded. In addition where multiple applications are required a rough surface between layers should be made to provide a mechanical key.

When using at low temperatures it is important to precondition the material in a warm environment and where possible warm the substrate prior to application.

Clean all tools and equipment after use with Nuwash.

## Packaging

Confil Mortar is available in 5 kg and 25 kg units, (2.36 litre and 11.78 litre packs respectively).

## Storage

Confil Resin is flammable (flash point is 31°C), due precautions should be made when handling and storing this material. Shelf life is 6 months when stored correctly in sealed containers, however at higher temperatures this period will be reduced. Store away from food stuffs and out of the reach of children.

## 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 our 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