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CE

Epicon Grout M

Nufins

Epoxide Grout

Description

Epicon Grout M is based on solvent free epoxy resins. It is one of five epoxy grouts in our range which are specified below. These cover the majority of grouting and fixing applications encountered within civil engineering and the construction industry in general, where the mechanical properties must be of the highest order. Tropical versions of the epoxy grout range are available for large pours and warmer climates. All of the grouts are designed to comply with the requirements of EN1504 Part 4.

Epoxide Grout Range

Epicon Grout RT: A pourable grout for free flow gap grouting recommended for gaps over 25mm where low exotherm is of consideration.

Epicon Grout L: A pourable grout for free flow gap grouting recommended for gaps 20mm to 100mm.

Epicon Grout M: A lightly filled pourable grout for free flow gap grouting recommended for gaps between 5-40mm.

Epicon Grout S: An unfilled grout for gap and crack widths between 0.25-6mm, also suitable for injection applications.

Epicon Grout H: A thixotropic grout for horizontal or inverted fixings.

Advantages

- Solvent free non-shrink system.
- No priming required.
- Chemically resistant.
- High compressive, tensile and flexural strengths.
- Rapid strength gain resulting in high bond strength.
- High dynamic load bearing tolerance.
- Excellent performance in harsh/extreme environments

Applications

- Grouting in machinery, turbines, centrifuges etc.
- Fixing/holding down bolts, starter bars, anchors etc.
- Grouting beneath heavy crane and transporter rails.
- Production of high strength bearing plinths.

Technical Information

Strength development

	24 Hour	72 Hour	7 Day	28 Day
Epicon Grout M	70 N/mm^2	77 N/mm^2	85 N/mm^2	90 N/mm^2

Working Life

Application Temperature	Pot Life
20°C	50 Minutes
10°C	115 Minutes
5°C	170 Minutes

	Result	Test Reference
Compressive Strength	90 N/mm^2	EN 12190
Adhesion, to Concrete	≥ 6.0 N/mm^2	EN 1542
Slant Shear Adhesion, to Steel	Θ50° = ≥ 50N/mm^2 Θ60° = ≥ 60N/mm^2 Θ70° = ≥ 70N/mm^2	EN 12188
Shear Strength	28 N/mm^2	EN 12188
Slant Shear Strength	33 N/mm^2	EN 12188
Tensile Strength	21 N/mm^2	BS 6319-7
Flexural Strength	34 N/mm^2	BS 6319-3
Modulus of Elasticity, in Flexure	≥ 10 kN/m^2	EN ISO 178
Modulus of Elasticity, in Compression	≥ 10 kN/mm^2	EN 13412
Flow	≥ 3 000mm^2	EN 1799
Shrinkage	≤ 0.1%	EN12617-1
Yield, per 20Kg Pack	9.8 Litres	

All tests conducted at 23°C, unless otherwise stated.

Technical Properties of Epicon Grout M.

Properties	Standard	Performance Requirement	Declared Value
Appearance			Black Resinous Grout
Max. aggregate size			0.3mm
Layer minimum thickness			5mm
Working time	EN ISO 9514		40 Minutes
Hardening Time			90-120 Minutes
Density			1900-2050 kg/m^3
Temperature for application			Between +5°C & +35°C
Flow/Squeezability test	EN 1799	≥3000 mm^2	≥3000 mm^2
Compressive Strength @ 23°C	EN 12190	≥ 30 N/mm^2	70 N/mm^2 @ 24 Hr 77 N/mm^2 @ 3 Days 85 N/mm^2 @ 7 Days 90 N/mm^2 @ 28 Days
Compressive Strength @ 5°C	EN 12190		39 N/mm^2 @ 24 Hr 68 N/mm^2 @ 3 Days 78 N/mm^2 @ 7 Days 85 N/mm^2 @ 28 Days
Modulus of Elasticity, in compression	EN13412	≥ 2 kN/mm^2	≥ 10 kN/mm^2
Tensile Strength	BS6319-7		21 N/mm^2
Flexural Strength	BS6319-3		34 N/mm^2
Modulus of Elasticity, in Flexure	EN ISO 178	≥ 2 kN/mm^2	≥ 10 kN/mm^2
Slant Shear Adhesion - Concrete	EN12615	≥ 6 N/mm^2	≥ 6 N/mm^2
Slant Shear Adhesion - Steel	EN12188	≥ 50 N/mm^2 @ Θ50° ≥ 60 N/mm^2 @ Θ60° ≥ 70 N/mm^2 @ Θ70°	≥ 50 N/mm^2 @ Θ50° ≥ 60 N/mm^2 @ Θ60° ≥ 70 N/mm^2 @ Θ70°
Shear Strength	EN12188	≥ 12 N/mm^2	28 N/mm^2
Slant Shear Strength	EN12188		33 N/mm^2
Glass Transition Temperature	EN12614	≥ 40°C	≥ 40°C
Coefficient of Thermal Expansion	EN1770	≤100 x 10^{-6} Per K	≤100 x 10^{-6} Per K
Total shrinkage	EN12617-1	≤ 0.1%	≤ 0.1%

Technical data shown are statistical results and do not correspond to guaranteed minima.
Tolerances are those described in appropriate performance standards.
All tests conducted at 23°C, unless otherwise stated.

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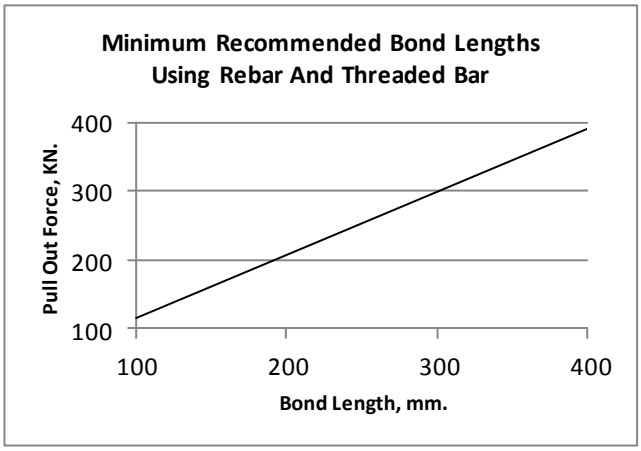
Bond Strength Development.
The bond strength of Epicon Grout M is dependent upon several factors, the main of which are:

- Strength of surrounding material.
- Method of drilling hole.
- Type of fixing.
- Resin bond length, see below.



Surface Preparation
All surfaces should be free from chemical contamination, oil, grease and debris. Oil and grease can be removed by using Desolve. Concrete should be scarified or acid etched using Chemclean to remove any laitance. Steel surfaces should be grit blasted to remove all rust and scale. All surfaces should be free from standing water.
Holes should be drilled to the required depth and diameter using a rotary percussive drill and all dust and debris removed using either compressed air or a bottle brush. For grouting under machinery etc., it will be necessary to use shuttering and construct a simple hopper system to give the grout a "head" of material enabling it to flow under the machinery.

Mixing
The entire contents of the Epicon Grout M hardener should be thoroughly mixed with the entire contents of the Epicon Grout base. This can be carried out in the plastic bucket supplied, or in the base resin tin for the larger packs. The aggregate is then added to the mixed resin in the mixing vessel and thoroughly mixed till an even consistency is obtained.
It is recommended that a forced action mechanical mixer be used. Alternatively a slow speed drill fitted with an appropriate paddle may be utilised, taking care not to entrain air.

Application
When pouring under machinery etc., the grout should be passed from one side only via a feed hopper. It is important that this is a continuous feed. Should more than one mix be required this must be carefully planned to maintain the feeding of the hopper.
Where grout is being poured into fixing holes the grout should be poured slowly and carefully to prevent air locking. The fixing should then be slowly inserted into the resin and checked for full bonding. The fixing should be left undisturbed until the grout has cured. All equipment should be cleaned immediately after use with Nuwash.

Packaging
Epicon Grout M is available in 4.5kg and 20kg units, yielding 2.2litres and 10litres respectively.

Storage
Epicon Grout M should be stored at room temperature. If stored in cold conditions the components should be warmed prior to use as this will greatly aid mixing and pouring. Epicon Grout M should be stored away from foodstuffs and out of reach of children.

Health and Safety
Epicon Grout M, like all other similar products, is capable of irritating unprotected sensitive skin. We therefore recommend the use of a barrier cream and the wearing of goggles and gloves.

Limitations
If grouting below 5^{o}C contact Nufins technical department.

Technical Support
Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors.
Technical representatives are available to provide additional information and arrange demonstrations.

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