



Specialist Construction Supplies for Repair, Maintenance, Building & Infrastructure

Epicon Grout H Data Sheet

Specification notes

Product: **Epicon Grout H**

Supplier:

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Epicon Grout H

Epoxide Grout



Nufins

Description

Epicon Grout H 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 H	50 MPa	60 MPa	63 MPa	65 MPa

All tests conducted at 20°C, unless otherwise stated.

Working Life

Application Temperature	Pot Life
20°C	50 Minutes
10°C	93 Minutes
5°C	135 Minutes

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EN 1504-4
Structural bonding

Compressive strength	≥30 MPa
Modulus of elasticity, in compression	≥2000 MPa
Shear strength	≥12 MPa

	Result	Test Reference
Compressive Strength	65 MPa	EN 12190
Adhesion, to Concrete	≥ 6.0 MPa	EN 1542
Slant Shear Adhesion, to Steel	@50° = ≥ 50 MPa @60° = ≥ 60 MPa @70° = ≥ 70 MPa	EN 12188
Shear Strength	20 MPa	EN 12188
Tensile Strength	16 MPa	BS 6319-7
Modulus of Elasticity, in Compression	≥ 5 GPa	EN 13412
Slump	<1.0mm	EN 1799
Shrinkage	≤ 0.1%	EN12617-1
Yield, per 3Kg Pack	2.3 Litres	

Technical Properties of Epicon Grout H.

Properties	Standard	Performance Requirement	Declared Value
Appearance			Resinous Paste
Layer minimum thickness			2mm
Maximum aggregate size			<1mm
Working time (@ 23°C)	EN ISO 9514		50 minutes
Hardening Time (@ 23°C)			60-120 Minutes
Density			1350 kg/m ³
Temperature for application			5°C to 35°C
Compressive Strength @ 23°C	EN 12190	≥ 30 MPa	50 MPa @ 24 Hr 60 MPa @ 3 Days 63 MPa @ 7 Days 65 MPa @ 28 Days
Compressive Strength @ 5°C	EN 12190		25 MPa @ 24 Hr 50 MPa @ 3 Days 55 MPa @ 7 Days 60 MPa @ 28 Days
Compressive Elastic Modulus	EN13412	≥ 2 GPa	≥ 5 GPa
Tensile Strength	BS6319-7		16 MPa
Flexural Strength	BS6319-3		24 MPa
Flexural Elastic Modulus	EN ISO 178	≥ 2 GPa	≥ 5 GPa
Slant Shear Adhesion - Concrete	EN12615	≥ 6 MPa	≥ 6 MPa
Slant Shear Adhesion - Steel	EN12188	≥ 50 MPa @ 50° ≥ 60 MPa @ 60° ≥ 70 MPa @ 70°	≥ 50 MPa @ 50° ≥ 60 MPa @ 60° ≥ 70 MPa @ 70°
Shear Strength	EN12188	≥ 12 MPa	20 MPa
Slant Shear Strength	EN12188		23 MPa
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.

1 N/mm² = 1MPa

1 kN/mm² = 1 GPa



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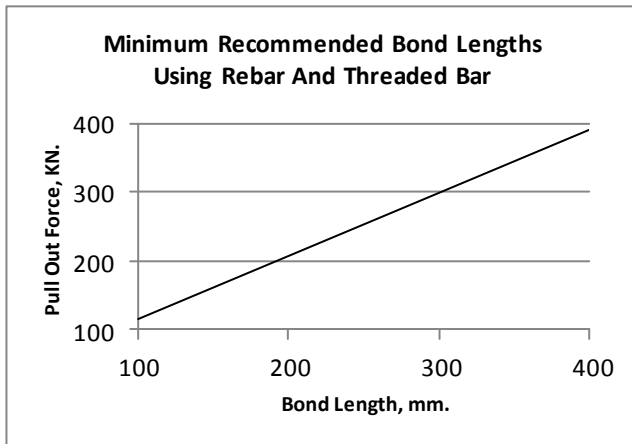
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Bond Strength Development.

The bond strength of Epicon Grout H 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. 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.

Mixing

The entire contents of the Epicon Grout H hardener should be thoroughly mixed with the entire contents of the Epicon Grout base. This can be carried out in the plastic bucket supplied. 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 gate paddle and slow speed drill be used, taking care not to entrain excessive air.

Application

Epicon Grout H should be gun applied into fixing holes and inserts, etc. The fixing should then be slowly inserted into the resin and checked for full bonding and wiping away excess material. The fixing should be left undisturbed until the Epicon Grout has cured. All equipment should be cleaned immediately after use with Nuwash.

Packaging

Epicon Grout H is available in 3kg, yielding 2.3 litres.

Storage

Epicon Grout H 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 H should be stored away from foodstuffs and out of reach of children.

Health and Safety

Epicon Grout H, 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°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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