



TECHNICAL DATA

High Performance Epoxy Grout

Epoxy Grout 280S

Description

High Performance Epoxy Grout (280S) is a high strength epoxy based grouting system offering longer work time characteristics for higher temperature conditions and deeper pours.

High Performance Epoxy Grout (280S) also provides benefits to specifiers and users with superior mechanical properties.

High Performance Epoxy Grout (280S) maybe extended on site with **Epirez[®] Epoxy Grout Aggregate Extender (QA30)** for situations requiring deep pours (above 30mm) or application during abnormally hot weather.

Areas of application

- Hot weather applications
- Foolproof grouting in all weather
- Rail anchoring and grouting
- Deep foundations
- Machinery grouting
- Structural anchoring of bolts, inserts, rebar

Features

- Excellent flow
- Low exotherm - long life
- Excellent chemical resistance
- Bonds to damp surfaces
- High mechanical strength
- Easy mixing - add aggregate on site if required
- Suitable for pours* 2mm to 80mm

*Dependent on volume of pour and addition of Aggregate Extender (QA30), please consult ITW Polymers & Fluids Technical Department for specific recommendations.

The information contained in this Technical Bulletin is as up to date and correct as possible as at the time of issue. The data provided should be used as a guide only as the performance of the product will vary depending on differing operating conditions and application methods.

The sale of any product described in this Technical Bulletin will be in accordance with ITW Polymers & Fluids Conditions Of Sale, a copy of which is available on request. To the extent permitted by law, ITW Polymers & Fluids excludes all other warranties in relation to this product.

General properties

Typical Data

		Test Method
Shelf Life	: 2 Years	
Appearance of Compound	: Cream non-settling paste	
Appearance of Hardener	: Blue thin liquid	
Mixing Proportions by Weight	: 1 Hardener to 10 Compound	
Mixing proportions by volume	: 1 Hardener to 5 Compound	
Density	: 1.7 g/cm ³	ASTM D1475
Initial Mixed Viscosity	: 4.0 Pa.s at 25°C	ASTM D2196
Work Time	: 60 minutes at 25°C 35 minutes at 35°C	
Cure Time	: 24 hours at 25°C	
Compressive Strength	: 105 MPa 100 MPa (with QA30 extension)	*ASTM C579 _(MOD)
Compressive Modulus	: 5.0 Gpa	*ASTM C579 _(MOD)
Secant Modulus	: 14.0 GPa (with QA30 extension)	*ASTM C579 _(MOD)
Tensile Strength	: 25 MPa	ASTM D638
Flexural Strength	: 38 MPa	ASTM C580
Maximum Placement Depth	: 80 mm (with QA30 extension under base plates)	
Maximum Operating Temperature	: 85°C	
Brinell Hardness	: 36	ASTM E10
Water Absorption (14 Days 20°C)	: 0.08%	
Impact Resistance (Izod)	: 2.5 kg/cm ²	ASTM D256
Dielectric Strength	: 180 kV/cm	

*Note: ASTM C 579 (MOD): Epoxy grouts cure by a chemical reaction that produces exothermic heat. The 50 mm cube samples specified by ASTM C 579 Test Method B do not produce enough exotherm to provide full cure in an efficient timeframe. To improve efficiency in testing, product samples are heated to 77°C for four (4) hours. This forces the sample to cure to the same degree as a larger grout pour. ASTM permit modifications of this test as long as they are noted in the report.

For further information refer to Technical Bulletin: EPIREZ – Compressive Testing Procedures for Epoxy Grouts.

Estimating Data

30 kg kit High Performance Epoxy Grout (280S) = 17.6 litres

Application Directions

Surface preparation

New concrete should be at least 28 days old. All surfaces should be clean and free from rust, dust, oil, wax, grease etc. Concrete should be scabbled, if necessary, to remove any weak, crumbly structure. Formwork should be treated for release by use of wax or plastic tape.

Surface preparation guidelines cannot cover all site or field contingencies and it is always recommended that an on-the-spot adhesion test be performed as part of the Standard Quality Assurance audit for the project.

Application

Pour contents of Hardener into Compound container and mix thoroughly for 5 minutes with a suitable blade fitted to a 400 rpm power mixer. Ensure all material around bottom and sides of can is incorporated.

For deep pours and for hot weather applications, **High Performance Epoxy Grout (280S)** may be extended with an equal volume of **Epirez® Epoxy Grout Aggregate Extender (QA30)**. Add slowly after hardener has been added and continue to mix until fully incorporated. DO NOT AERATE. Pour mixed material slowly into the prepared void, from one side only, so as to avoid air entrapment. Do not install equipment before full cure is attained.

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Cleaning

Tools and equipment may be cleaned before hardening commences by washing in **Epirez® Clean Up Solvent**. Do not use for cleaning hands or mixing with product.

Limitations

High Performance Epoxy Grout (280S) should not be applied at temperatures below 10°C.

Storage and Shelf Life

Store in dry conditions between 10°C and 30°C, away from sources of heat and naked flames. Protect from frost. When stored in original containers the minimum shelf life is 2 years.

Packaging

High Performance Epoxy Grout (280S) is available in 30 kg packs. Each pack contains Hardener and Compound in correct proportions for use.

Ordering Information:

High Performance Epoxy Grout (280S) 30 kg	#E991199
Epoxy Grout Aggregate Extender (QA30) 18 Lt	#E992410

Note

The figures quoted for work time and curing time are not definitive. They are dependent on job site conditions and will vary accordingly. In all cases we endeavour to provide typical figures for use as a guide.

Health & Safety Information

The product is hazardous. A Material Safety Data Sheet is available from the ITW Polymers & Fluids Technical Department upon request or available on our website www.epirez.com.au.

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