HIGH PERFORMANCE GROUT (280S)

EPOXY GROUT FOR HIGHER TEMPERATURES & DEEPER POURS

DESCRIPTION

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

EPIREZ® High Performance Epoxy Grout also provides benefits to specifiers and users with superior mechanical properties.

EPIREZ® High Performance Epoxy Grout maybe extended on site with **EPIREZ® Epoxy Grout Aggregate Extender (QA30)** for situations requiring deep pours (above 50mm) or application during abnormally hot weather.

EPIREZ® High Performance Epoxy Grout was previously named **EPIREZ® 280S Grout**.

INTENDED USE

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

PRODUCT 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.

ESTIMATING DATA

30 kg kit **EPIREZ® High Performance Epoxy Grout** = 17.6 L

30 kg kit **EPIREZ® High Performance Epoxy Grout** + 18 L **EPIREZ® Epoxy Grout Aggregate Extender (QA30)** = 21.5 L

TYPICAL PHYSICAL PROPERTIES

Technical data should be considered representative or typical only and should not be used for specification purposes.

		Test Method
Appearance of Compound	Cream, non-settling paste	
Appearance of Hardener	Thin blue liquid	
Mixing Ratio by Weight	1 Hardener to 10 Compound	
Mixing Ratio by Volume	1 Hardener to 5 Compound	
Density	1.7 g /cm_3	
Initial mixed viscosity	4.0 Pa.s at 25°C	

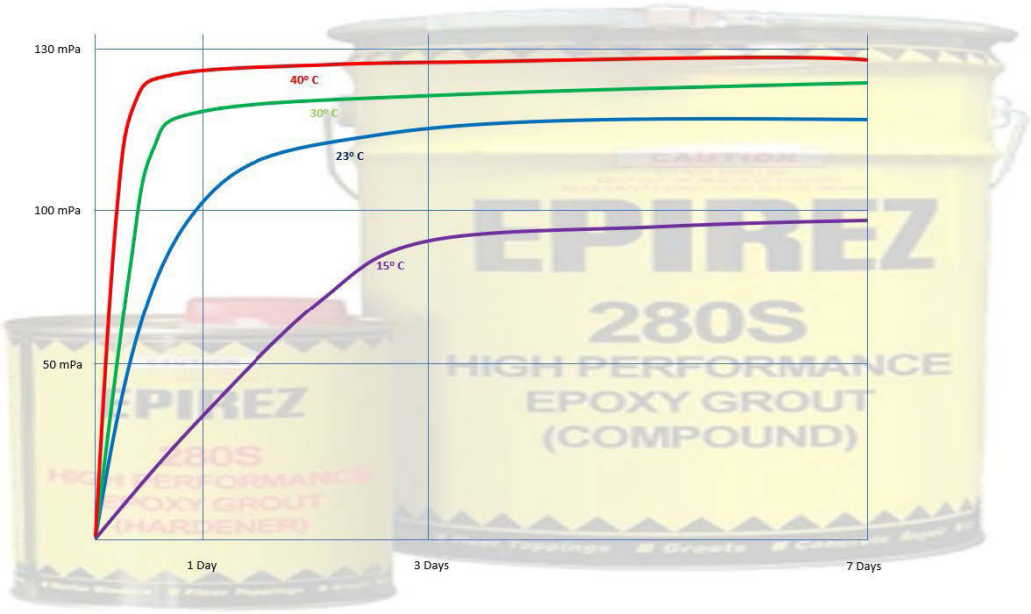
Work Time	60 minutes @ 25°C 35 minutes @ 35°C	
Cure Time	24 hours @ 25°C	
Compressive Strength	>125 MPa >110 MPa 100 MPa (with QA30 extension)	AS 1478-2 (App A)** ASTM C579 (MOD)* ASTM C579 (MOD)*
Compressive Modulus	4.0 GPa	
Maximum Placement Depth	80mm (with QA 30 extension under baseplates)	
Maximum Operating Temperature	85°C	
Water Absorption (14 Days 20ºC)	0.08%	
Dielectric Strength	180 kV/cm	
Shelf life	2 years	

* 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.

** Note: AS1478.2 (App A) : This test method is designed for concrete testing and is provided here for comparative purposes only.

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

Compressive Strength - Time versus Temperature Data (ASTM C 579 (MOD)



	15º C	**23º C**	**30º C**	**40º C**
6 Hours		9.7	70.5	107.8
16 Hours	24.3	74.3	104.8	114.9
1 Day	30.9	88.8	113.8	122.9
3 Days	81.2	110.1	117.9	> 125
7 Days	88.1	112.1	122.5	> 125

MPa

This data has been generated under laboratory conditions using 50mm cubes following a cure modification of ASTM C 579. Due to the exotherm generated during epoxy during, mass to surface area ratio, mass, ambient temperature, and thermal conductivity of surrounding substrate will cause vibration to the above results in in-field application and therefore these results should be used as a guide only.

SURFACE PREPARATION

Prepare the surfaces for adhesion or release as desired. New concrete should be at least 28 days old.

Formwork which provides a “head” of material will facilitate flow into finer cavities and voids.

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.

MIXING INSTRUCTIONS

It is strongly recommended that full units be mixed, as ratios are pre-measured.

Proper homogenous mixing of resin and hardener at the correct ratio is essential for the curing and development of stated properties. Precondition product to between 18 to 25°C before use.

Pour contents of Hardener into Compound container and mix thoroughly for 5 minutes using a suitable blade fitted to a 400 rpm power mixer.
Ensure that all the material on the sides, under the lip of the container and on the stirrer is incorporated.

Note: Take care to avoid air entrapment into the mix. Keep propeller below liquid line, as additional air can be added to mixture, resulting in air bubbles on the surface of the finished product.

APPLICATION INSTRUCTIONS

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.

CLEAN UP

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

STORAGE

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 sealed containers, the minimum shelf life is two (2) years.

WARRANTY

Epirez will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

DISCLAIMER

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Polymers & Fluids and EPIREZ® makes no representations or warranties of any kind concerning this data.

ORDER INFORMATION

Item No.	**Package Size**
E991199	30kg

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For Health & Safety information, refer to Safety Data Sheet available from ITW Polymers & Fluids upon request or available on our website.