

CHOCKFAST® RED

Deep Pour Epoxy Grouting Compound

Description:

Chockfast® Red is a three-component, high strength, 100% solids, epoxy grouting compound, which is used to grout large machinery and to support soleplates in all types of foundation designs.

Chockfast® Red has extremely high compressive strength and negligible shrinkage, making it ideal for the final positioning of critically aligned machinery within close tolerances.

Chockfast® Red has the following advantages when compared to conventional cement grouts:

- Impervious to oil
- Cures at least three times as quickly
- No mixing ratios to measure
- Grouts machinery in final aligned position
- Higher physical strength
- Resistance to many more chemicals
- Strong bond to metal and concrete
- Unaffected by weathering and freeze/thaw cycling
- Stated physical properties assured
- Superior resistance to fatigue

Chockfast® Red contains no non-reactive diluents which could interfere with the curing mechanism or which could cause material loss during or after cure. Machinery may be positioned at its final elevation before pouring because the shrinkage is negligible. Critical alignments are maintained during machinery operation due to its high dimensional stability and resistance to creep and vibration.

Chockfast® Red may be mixed with a contractor's hoe and wheelbarrow or in a small portable mortar mixer. Precondition resin, hardener and aggregate to 18°-27°C for 48 hrs, before mixing. Thoroughly mix hardener with resin first before mixing in aggregate. Where a very flowable mix is required, the aggregate content may be reduced accordingly. However, in load bearing areas a maximum reduction to 3-1/2 bags is recommended. Please contact ITW Polymers & Fluids Technical Department if less than 3-1/2 bags are being considered.

Chockfast® Red is quick curing, relative to cement grouts, but the cure is thermally gentle. This allows thick pours to be made without causing the stress cracks often associated with a hot-curing epoxy grout. Chockfast® Red may be used in thicknesses greater than 50mm, however, individual pours should generally not exceed 460mm in thickness and 2.2m in length. When grouting highly critically aligned machinery, which is coupled to another machine, it is advisable to limit the final levelling pour.

AUSTRALIA

ITW Polymers & Fluids
100 Hassall Street
Wetherill Park NSW 2164
Phone (02) 9757 8800
www.itwpf.com.au

NEW ZEALAND

ITW Polymers & Fluids
Unit 2 / 38 Trugood Drive
East Tamaki 2013, Auckland
Phone (09) 272 1945
www.itwpf.co.nz

Typical Physical Properties:

Coefficient of Linear Thermal Expansion: Temperature Range 0° to 60°C	20.1 x 10 ⁻⁶ / C°	TEST METHODS ASTM D-696
Compressive Modulus of Elasticity:	13,812 MPa	ASTM C-579 (Modified)
Compressive Strength:	105.3 MPA	ASTM C-579 (Modified)
Fire Resistance	Self-extinguishing	ASTM-D-635
Flexural Strength:	27.8 MPa	ASTM C-580
Flexural Modulus of Elasticity:	13,812 MPa	ASTM C-580
Izod Impact Strength:	0.02 N.m/mm	ASTM D-256
Linear Shrinkage:	Not measurable	ASTM D-2566
Pot Life:	Approximately 3 hours @ 21°C	
Specific Gravity:	2.06	
Tensile Strength:	133 kg/cm ²	ASTM D-638
Packaging:	Resin : 6.1 litres Hardener: 3.4 litres Aggregate: 4 x 21kg bags	
Shelf Life:	2 years in dry storage	

Estimating Data:

94kg kit Chockfast® Red = 45.3 Litres

Application Instructions:

Introduction

The following CHOCKFAST® surface preparation, mixing, pouring and storage procedures have been written as an aid for contractors and end users applying CHOCKFAST® on a job site.

If the application procedures are not adhered to it is recommended that the user contact ITW Polymers & Fluids Technical Department for alternate methods. All procedures in this technical data sheet apply to Chockfast® Red, unless stated otherwise.

Foundation Preparation

- New concrete needs to be 21 to 28 days fully cured or have a compressive strength of 21 MPa and tensile strength of 2.1 MPa. In order to ensure a good bond of epoxy to the concrete, check that hydration has ceased.
- The concrete should be chipped to remove all laitance and 50% of the aggregate exposed to provide a rough bonding surface for the epoxy. Dowels should be installed on new exposed concrete to prevent edge lifting.
- The concrete foundation should be dry and oil free before the pouring of grout.
- Form as for concrete using good quality form material. Fit 30mm x 45mm chamfer pieces. Wax or grease all surfaces of forming in contact with resin. Seal all gaps with suitable mastic or putty
- Sleeve all foundation bolts in way of resin to prevent adhesion and to allow bolt stretch. *Construct header boxes if resin has to flow more than one metre.

Preparation of Baseplates or Soleplates

- All 90° angles on steelwork in contact with the epoxy should be rounded to reduce stress concentrations in the grout. Round shim stock is preferred.
- Surfaces of baseplates or soleplates in contact with grout should be sandblasted to a clean, oil free, dry surface. Epoxy primer can be applied to the clean metal surfaces to prevent rusting.

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Mixing

- Pour contents of Hardener into Compound container and mix thoroughly for 3 minutes with a suitable blade fitted to a 400 rpm power mixer. Ensure all material around bottom and sides of can is incorporated.
- Chockfast® Red should be mixed in a 15 -20 rpm mortar mixer capable of holding a minimum of 90.6 litres.
- Add the premixed liquids to the mortar mixer and one bag of aggregate. Progressively add the remaining bags of aggregate assuring a homogeneous mix. **Mixing is complete when aggregate is wet** (for the first mix, ½ a bag of aggregate should be withheld to facilitate the "wetting out of the mixer").
- Subsequent mixes should contain 4 bags. Never reduce aggregate by more than half a bag to improve flow.
- It is important to mix the grout until the 4 bags of aggregate have been "**wetted out**". Over mixing will encourage the entrapment of air.

Pouring

- Pour the Chockfast® Red as soon as possible after mixing.

Work Time (Pot Life)

2-3 hours @ 21°C

Cure Time

54 hours @ 16°C

36 hours @ 21°C

24 hours @ 27°C

18 hours @ 32°C

- Protect newly poured Chockfast® Red from sudden temperature changes and direct sunlight.
- Additional layers of Chockfast® can be poured providing the initial pour has returned to an ambient temperature and the surface has been roughened up to provide a mechanical bond.

Precautions:

The figures quoted for work time, cure time and coverage 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.

Storage:

Store in dry conditions between 10°C and 30°C. Protect from frost. When stored in original sealed containers, the minimum shelf life is 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.

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**Disclaimer:**

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

Order Information:

94kg D11950

Health & Safety Information:

For Health & Safety information, refer to Safety Data Sheet available from ITW Polymers & Fluids upon request or available on our website www.epirez.com.au or www.epirez.co.nz

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