

Application of Conbextra Epoxy Grouts - Bonded Anchoring

Introduction

The following information is provided as a guide to typical use of Conbextra EP10 and Conbextra EP65 Plus as bonded anchors for vertical anchoring applications. If any doubt exists on site regarding the product or process being used it is important that consultation with all parties involved takes place and then proceed with an agreed plan.

Conbextra EP10 and Conbextra EP65 Plus have been independently tested by Swinburne University for pull-out strength in concrete in various configurations of bar diameter and hole size and depth as detailed in the chart below. The testing was conducted under controlled conditions at 23°C in 40MPa design mix concrete cured for 28 days.

Anchors used were Grade 8.8 hot dipped galvanised steel all-thread.

Testing of Conbextra EP10 was conducted after 3 days cure time.

Testing of Conbextra EP65 Plus was conducted after 24 hours and 3 days cure time.

Copies of the full test reports are available from the Fosroc website and results are summarised below:

Product	Anchor diameter (mm)	Hole diameter (mm)	Embedment depth (mm)	Epoxy cure time	Average load (kN)	Failure mode
Conbextra EP10	10	13	100	3 days	50.1	Steel
Conbextra EP10	10	15	80	3 days	51.1	Steel/concrete
Conbextra EP10	10	15	100	3 days	51.7	Steel
Conbextra EP65 Plus	12	18	100	24 hours	68.8	Steel/concrete
Conbextra EP65 Plus	12	18	100	3 days	70.9	Steel
Conbextra EP65 Plus	24	35	200	24 hours	315.8	Concrete
Conbextra EP65 Plus	24	35	200	3 days	341.1	Steel/concrete

Preparation of the foundation

The concrete foundation or plinth will typically have been cast weeks before the anchoring is to take place. A minimum 28 days (4 weeks) curing should be allowed unless special concrete mixes are being used.

The nominated holes are to be percussion drilled vertically into the concrete; any dust or foreign matter must be blown out with oil-free, dry compressed air and brushing. The steel should be grit blasted clean and degreased to achieve good bond.

The anchor holes must be free of any surface water (surface dry).

Mixing

Correct mixing of the grout is critical to the success of the total job.

Temperature considerations - All grouts should be stored at suitable temperatures – typically above 10°C and below 30°C; ideal conditions are at 23°C. This not only protects the shelf life of the product but also improves the mixing and placement properties of the products.

Conbextra Epoxy Grouts are supplied in convenient size kits of base component and hardener component. DO NOT attempt to mix part kits unless accurate weighing scales are used and the product is mixed accurately in the product mix ratio. The mix ratio is critical to the performance of the cured grout.

With suitable equipment begin mixing the base component first to help re-incorporate any settlement; slowly add all the hardener component while continuing to mix; at the lowest setting possible once all the hardener is poured in continue to mix for a further 3 minutes taking care to mix product from around the sides and bottom of the containers. Scraping down the mixer and sides of the container half way through the mixing is a good idea. Ensure the paddle is fully immersed in the grout whilst mixing. Do not pull the paddle up and down whilst mixing. By following these two points will help minimise the entrapment of air

Mixing should be monitored with a stopwatch / clock to ensure sufficient mixing time is achieved.

Mixing equipment - When mixing one kit at a time, use a helical mixing paddle fitted to a heavy-duty 1600W mixer, or similar.

Fosroc® Conbextra® Epoxy Grouts - Anchoring

Application
Guide

Placement

The mixed Conbextra EP65 Plus (or Conbextra EP10) should be poured into the concrete hole to a depth approximately 2/3 the depth of the hole; the nominated steel bar then gently pushed into the hole with a slow turning action to release any trapped air. Remove any excess epoxy exuding out of the hole and support the bar in the correct vertical position within the hole.

Curing and Protection

The anchor should also be protected as much as possible from extremes in weather – both hot and cold.

Allow the epoxy anchor to cure for the required period of time before applying any load.

Important notice

Safety Data Sheets (SDS) and Technical Data Sheets (TDS) are available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Application Guide summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read all literature carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.



constructive solutions

Fosroc, Conbextra and the Fosroc logo are trade marks of Fosroc International Limited, used under license.

Page 2

Parchem Construction Supplies Pty Ltd

1956 Dandenong Rd Clayton VIC 3156

Ph: 1800 812 864

www.fosroc.com.au

ABN 80 069 961 968

Distributed in New Zealand by: Concrete Plus Ltd

150 Hutt Park Road Gracefield Ph: 0800 657 156

www.fosroc.co.nz

NZBN 9429033691282