Fosroc® Conbextra EPHT

Technical Data Sheet

A high temperature epoxy grout for dynamic / repetitive load applications

Uses

A free flowing grout where the mechanical properties and chemical resistance of the hardened grout must be of the highest order. Applications include heavy duty supports beneath crane and transporter rails, high speed turbines and centrifuges, drop forges, reciprocating machinery and other operating or test equipment subject to heavy dynamic or repetitive loads. Suitable for high temperature works up to 160°C.

Advantages

- Suitable for use in high temperature operating environments
- High flexural strength and adhesion to substrate ensure excellent performance under dynamic load situations
- High early strength performance allow minimum down time and early commissioning of plant
- Simple mixing and free flowing properties ensure a convenient application and total bearing support
- Withstands attack by a wide range of chemicals, acids and alkalis
- Epoxy resin adheres to contact surfaces with no loss of bond
- High compressive, flexural and tensile strengths ensure durability and long term service
- Designed for low creep characteristics under sustained loading and elevated temperatures
- Pre-measured, factory controlled materials allow reproducible flow and mechanical properties

Description

Conbextra EPHT is a solvent free epoxy resin based product designed for free flow grouting of gap widths from 10 mm - 120 mm where high service temperatures are present.

The components of Conbextra EPHT are supplied in the correct mix proportions designed for whole pack mixing so that flow and mechanical properties are consistant.

Technical Support

Parchem offers a comprehensive range of high performance, high quality construction products. In addition, the company offers a technical support package to specifiers and contractors as well as technical advice from staff experienced in the construction industry.

Properties

Data quoted is typical for this product, but does not constitute a specification.

Pot Life

The time for which complete packs once mixed, remain fluid will vary with temperature. Typical values are:

20°C	80 minutes
30°C	50 minutes
40°C	35 minutes

Exotherm

The temperature rise developed in the mixed grout is a function of the volume to surface area ratio, the ambient temperature, and the thermal conductivity of the surrounding substrates. The temperature increase of Conbextra EPHT under insulated (ie. no heat sink) conditions is typically 17°C for a 1 kg batch.

Temperature Limitations

During application, grouting may be carried out at ambient temperatures from 20°C - 65°C. In service, Conbextra EPHT is suitable for continuous use at temperatures up to 160°C. For applications or services outside these temperature ranges contact your local Parchem branch.

Compressive Strength Gain

Tested in accordance with BS4551, BS2782, BS6319 where applicable. Conbextra EPHT must be post cured at an elevated temperature before being subjected to high loads. Post curing at 80°C for 3 hours followed by 2 hours at 120°C will ensure that the Conbextra EPHT is fully cured and capable of offering maximum creep resistance. Post curing at lower temperatures is also acceptable however a longer curing period will be required.

Compressive strength: 110 MPa @ 2 days @ 35°C

Note: Compressive strengths stated above were measured using cube samples. Test results obtained will vary if testing is carried out to an alternative standard or sample dimensions are used.

Specification Clauses

Supplier specification

All grouting (specify details and areas of application) must be carried out using Conbextra EPHT manufactured by Parchem and applied strictly in accordance with the manufacturer's Technical Data Sheet.

Performance specification

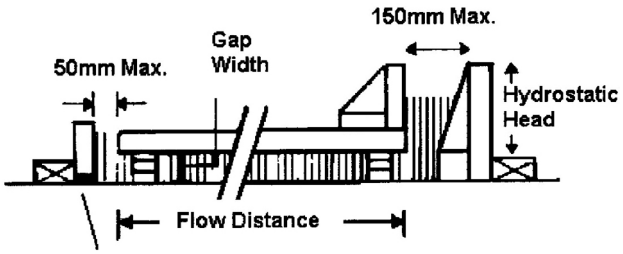
All grouting (specify details and areas of application) must be carried out with a prepackaged epoxy grout. The grout must be mixed on site using the entire contents of a pack, base plus hardener (and aggregate if specified). The compressive strength of grout with supplied aggregate must not be less than 75 N/mm² at 7 days. Compressive strength for the grout without aggregate is to be not less than 55 N/mm². The resin systems must comply with ASTM C 881-78 Type 111, Grade

1, Class B or C. The grout must be stored, handled and placed strictly in accordance with the manufacturer's instructions. The grout must be able to resist in-service temperatures up to 160°C.

Instructions for Use

Formwork design for underplate grouting:

A typical grouting layout is shown in figure 1.



HG 1: Typical On-plate Shutter System

Preparation

Underplate grouting: The unrestrained surface area of grout must be kept to a minimum. Generally the gap between the perimeter formwork and the plate edge should not exceed 150 mm on the pouring side and 50 mm on the opposite side.

The formwork should be constructed to be leakproof as Conbextra EPHT is a free flow grout. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints.

Foundation surface

This must free from oil, grease, or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes or fixing pockets must be blown clean of any dirt or debris.

All surfaces must be substantially clean and dry.

Mixing

The entire contents of the base and hardener should be poured into a suitable container and mixed for 2 minutes with a festo mixer or a slow speed drill fitted with spiral mixing blade. Slowly add the fillers to the mixed base and hardener while continuing to mix for a further 3 minutes using a forced action mixer. Once mixed, the material must be used within the specified pot life (see Properties). After this time, unused material will have stiffened and should be discarded.

Placing

Place the grout within the pot life of the material. Continuous grout flow is essential. Sufficient grout must be available prior to starting and the time taken to pour a batch must be regulated to the time taken to prepare the next one. Pouring is to be from one side of the void entry to eliminate the entrapment of air. The hydrostatic head must be maintained at all times so that a continuous grout front is achieved.

Please refer to the Conbextra Epoxy Grouts Application Guide for further information. This is available from the website or your local Parchem branch.

Cleaning

All tools and equipment should be cleaned with Solvent 10 immediately after use.

Estimating

Supply

Conbextra EPHT is supplied in 14 litre packs containing base resin, hardener and fillers

Storage

Conbextra EPHT has a shelf life of 12 months if kept in dry conditions at 20°C.

Parchem Construction Supplies Pty Ltd
7 Lucca Road, Wyong NSW 2259
Phone: 1300 737 787
www.parchem.com.au
ABN 80 069 961 968

Distributed in New Zealand by: Concrete Plus Ltd
23 Watts Rd, Sockburn 8042 Ph: 03 343 0090