



Expangrout* EP75

Creep resistant, high strength, epoxy resin grout

Uses

Provides a free flowing grout, for use where physical properties and chemical resistance of the hardened grout are of utmost importance. It is suitable for a wide range of heavy duty applications including :

- Underplate grouting to substantial structural elements.
- Base plate grouting in dynamic load situations such as turbines and other reciprocating machinery.
- Heavy industrial applications in steelworks, refineries chemical plants and electroplating works.
- Structural infill where very high strength is required.
- Rail track applications, to support heavy cranes, or on transporter rails.

Advantages

- Creep resistant - to improve resistance to deformation under constant loading.
- Excellent durability - high compressive, flexural and tensile strengths ensure a long working life.
- Cost effective - high early strength gain promotes minimum downtime and early commissioning of plant.
- User friendly - simple, full pack mixing to ensure that the performance characteristics are achieved.
- Versatile - suitable for a wide range of loading situations including repetitive dynamic loads.
- Excellent in service performance - non-shrink capability ensures full surface to surface contact.

Description

Expangrout* EP75 is a solvent free epoxy resin grout designed for grouting of gap widths of 10 to 75 mm. It is supplied as a three component system consisting of base, hardener and specially graded aggregate. The components are supplied in the correct mix proportions designed for whole pack mixing on site.

Specification

Where shown on the contract documents, the epoxy grout shall be Expangrout* EP75 supplied by Expanchem Fospak. It shall provide good general chemical resistance, 7 day compressive strength of 100 N/mm², and a compressive creep of 2.05 x 10⁻³ mm/mm in accordance with ASTM C1181.

Properties

Pot life : 2 hours @ 23°C

Tensile strength : 14 N/mm² at 7 days

Flexural strength : 26 N/mm² at 7 days

Compressive strength : 90 N/mm² at 1 day
95 N/mm² at 3 days
100 N/mm² at 7 days

Maximum flow distance for a head of 100 mm at 20°C:

35 mm gap - 2000 mm

70 mm gap - 3500 mm

Coefficient of thermal expansion

ASTM C531 : 28.1 x 10⁻⁶

Compressive creep

(ASTM C1181- 2.85N/mm²

1 year, 60°C : 2.05 x 10⁻³ mm/mm

Instructions for use

Preparation

Underplate grouting

The unrestrained surface area of the grout must be kept to a minimum. Generally, the gap between the perimeter formwork and the plate edge should not exceed 75 mm on the pouring side and 25 mm on the opposite side. Formwork on the flank sides should be kept tight to the plate edge. Air pressure relief holes should be provided to allow venting of any isolated high spots.

Formwork

The formwork should be constructed to be leak proof as Conbextra EP75 is a free flow grout. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints.

For free flow grout conditions, it is essential to provide a hydrostatic head of grout. To achieve this a feeding hopper should be used - please consult your local Expanchem Fospak office for more details.

Foundation surface

This must be 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.



CONSTRUCTION CHEMISTRY

Base plate

If delay is likely before placing steel base plates, it is recommended that the underside and edge are coated with Expanprime* 25* to prevent rust formation and ensure bonding with the Conbextra EP75 grout. All metal surfaces should be cleaned to a bright finish in accordance with Swedish Standard SA 2½ or equal. Expanprime* 25 can be applied directly onto newly cleaned steel surfaces even if they are damp.

Mixing

The entire contents of the hardener can should be poured into the base container and mixed until homogeneous. Place the mixed base and hardener into a suitable forced action mixer making sure that the entire volume is poured in. Add the aggregate and mix for 2-3 minutes or until uniform colour is achieved. Once mixed, the material must be used within the specified pot life (see under Properties). After this time, unused material will have stiffened and should be discarded.

Note: Immediately prior to placement, all surfaces must be dry.

Placing

Ensure that the grout can be placed within its pot life. 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 should be from one side of the void to eliminate air entrapment. The hydrostatic head must be maintained at all times so that a continuous grout front is achieved.

Cleaning

All tools and equipment should be cleaned immediately after use with Expanchem Solvent 102*.

Limitations

- For underplate grouting, failure to adhere to "Instructions for use", may result in cracking & edge uplifting.

Hot weather working

Whilst the performance of Expangrout* EP75 at elevated temperatures is assured, application under such conditions can sometimes be difficult. It is therefore suggested that, for temperatures above 35°C, the following guidelines are used:

- (i) Store unmixed materials in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- (ii) Keep mixing and placing equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.
- (iii) Try to eliminate application in the middle of the day, and certainly avoid application in direct sunlight.
- (iv) Ensure that there are sufficient operatives available to complete application within the material's pot life.

Estimating

Supply

Expangrout* EP75 : 14 & 15 litre packs

Expanprime* 25 : 1 and 4 litre packs

Expanchem Solvent 102 : 5 litre packs

Coverage

Expanprime* 25 : 4.0 to 5.0 m²/litre

Storage

When stored in warehouse conditions below 35°C, Conbextra EP75 will have a shelf life of 12 months.

Precautions

Health and safety

Some people are sensitive to epoxy resin so gloves and a barrier cream such as Kerodex 71, Rozalex 9, Debba-Wet Work or similar should be used when handling these products. If contact with the resin occurs, it must be removed before it hardens with a resin removing cream such as Kerocleanse 22 or Rozalex 42. Follow by washing with soap and water. Do not use solvent. The use of goggles is recommended but should accidental eye contamination occur, wash thoroughly with plenty of clean water and seek medical treatment immediately.

Fire

Expanprime* 25 and Expanchem Solvent 102 are flammable.

Flash points

Expanprime* 25 : 39°C

Expanchem Solvent 102 : 33°C



CONSTRUCTION CHEMISTRY

* Denotes the trademark registered.

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