



CONSTRUCTION CHEMISTRY

Expangrout* EP300

Low exotherm, epoxy resin free flow grout

Uses

Suitable for use where heavy, dynamic or mobile loads are encountered. Particularly well suited to applications where long working time and/or large volume grouting is required

- Grouting under reciprocating or rotating equipment
- Heavy crane/rail tracks/Bridge expansion joints
- High speed turbines and centrifuges
- Grouting over long distances and/or in thick sections
- All applications under conditions of high ambient temperature
- Ideal for the Oil & Gas and water industry.
- Ideal for grouting of reciprocating pumps & machines.

Advantages

- Low creep characteristics under sustained loading.
- Resistant to repetitive dynamic loads.
- Non-shrink and hence ensures complete surface contact and bond.
- High compressive, tensile and flexural strengths.
- Withstands a wide range of chemicals.

Description

Expangrout* EP300 is a low exotherm material which is particularly suitable where long working time is needed; for large gaps (up to 300 mm) or for grouting at high ambient temperatures (up to 55°C).

Expangrout* EP300 is a three component system consisting of base resin, liquid hardener and specially graded inert fillers.

Technical support

Expanchem Fospak offers a comprehensive range of high performance, high quality construction products all backed by BS 5750 certification. Expanchem Fospak offers a technical support package to specifiers and contractors as well as technical advice from staff with unrivalled experience in the industry.

Properties

Compressive strength

BS6319 Part 2:1983 : 100N/mm²
7 days @35°C

Tensile strength

BS6319 Part 7: 1983 : 14N/mm²
7 days @35°C

Flexural strength

BS 6319 Part 3: 1983 : 30N/mm²
7 days @35°C

Density : 1950 kg/m³

Pot Life : 50 mins at 40°C
80 mins at 30°C
100 mins at 20°C

Chemical resistance : Oil, grease, fats, most chemicals, mild acids and alkalis, fresh and sea water.

Note: Consult the local Expanchem Fospak Office when exposure to solvents or concentrated chemicals is anticipated.

Specification

Supplier specification

Where shown on the contract documents, all epoxy resin grouting shall be carried out using Expangrout* EP300 manufactured by Expanchem Fospak and used in accordance with the manufacturer's current data sheet.

Performance specification

All epoxy resin grouting where shown on the contract documents must be carried out with a factory packed product. The hardened grout must have strengths exceeding:

Compressive strength : 80 N/mm² at 7 days
Tensile strength : 10 N/mm² at 7 days
Flexural strength : 27 N/mm² at 7 days

The storage, handling and placement of the grout must be in strict accordance with the manufacturer's instructions.



CONSTRUCTION CHEMISTRY

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 Expangrout* EP300 is a free flow grout. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints. Loss of grout once the material is placed, but not hardened, will result in incomplete filling of the gap.

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.

Typical on-plate shutter system

Removable hopper: for larger pours the grout may be hand placed or pumped into a removable hopper (trough)

Foundation surface

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

Base plate

If delay is likely before placing steel base plates, it is recommended that the underside and edges are coated with Expanprime* 25* to prevent rust formation and ensure bonding with the Expangrout* EP10 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

Pour all the contents of the hardener pack into the base container. Mix using a slow speed power mixer until homogeneous.

Pour all the resultant liquid into a container with a capacity of 20 - 25 litres. Add all the filler provided and mix using a slow speed power mixer for two minutes or until a uniform colour is achieved in the grout.

Placing

The mixed grout should be poured steadily from one side only to eliminate the entrapment of air.

Continuous grout flow is essential.

Sufficient grout must be available prior to starting.

The time taken to pour a batch should be regulated to the time taken to prepare the next batch.

Flow characteristics

The maximum distance of flow is governed by the gap thickness, the head of grout applied and the ambient temperature.

Cleaning

All tools and equipment should be cleaned immediately after use with Expanchem Solvent 102*. Spillages should be absorbed with sand or sawdust and disposed in accordance with local regulations.

Limitations

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

Low temperature working

Whilst the performance of Expangrout* EP300 at low temperatures is assured, application under such conditions can sometimes be difficult. It is therefore suggested that, for temperatures below 25°C, the following guidelines are adopted:

- (i) Store unmixed materials in a warm (preferably temperature controlled) environment.



CONSTRUCTION CHEMISTRY

- (ii) Keep mixing and placing equipment warm, arranging protection if necessary. It is especially important to keep warm those surfaces of the equipment which will come into direct contact with the material itself.
- (iii) Try to eliminate application in the coldest time of the day, and certainly avoid application at night.
- (iv) Minimum temperature of the mixed material to be 25°C, and loading shall only be allowed 72 hours after pouring.

Estimating

Supply

Expangrout* EP300 : 20 Kg. Packs

Storage

All Expangrout* EP300 has a shelf life of 12 months if kept in dry conditions at 20°C. If stored at high temperatures the shelf life will be reduced.

Precautions

Health and safety

Expangrout* EP300 contains resins which may cause sensitisation by skin contact. Avoid contact with skin and eyes and inhalation of vapour. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream, followed by soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Fire

Expanchem Solvent 102 is flammable. Keep away from sources of Ignition. No smoking. In the event of fire extinguish with CO2 or foam. Do not use a water jet.

Flash points

Expanchem Solvent 102 : 33°C

For additional information see relevant Material Safety Data Sheet.

Additional Information

Expanchem Fospak manufactures a wide range of complementary products which include :

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialised flooring materials

Expanchem Fospak additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Expanchem Fospak's 'Systematic Approach' to concrete repair features the following :

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Expanchem Fospak office - as below.



CONSTRUCTION CHEMISTRY

* Denotes the trademark registered.

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Important note

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