

# Expangrout\* EPGP



CONSTRUCTION CHEMISTRY

## Multi-purpose, epoxy resin grout

### Uses

For free flow grouting where the mechanical properties, low permeability and chemical resistance of the hardened grout are of the highest order. Typical applications include:

- Heavy duty support to large structural elements.
- Supporting dynamic and or mobile loads.
- Pile top encapsulation.

### Advantages

- High flexural strength and adhesion to substrate ensures excellent performance under dynamic operating conditions.
- Simple mixing followed by high early strength allows minimum down time and early commissioning of plant.
- Withstands attack by a wide range of chemicals, acids and alkalis, as well as water and frost.
- High compressive, flexural and tensile strengths ensure durability and long term service life.
- Very low permeability ensures integrity as part of a waterproofing system.

### Description

Expangrout\* EPGP solvent free epoxy resin grout is designed for grouting of gap widths of 20-80mm. It is supplied as a three component system consisting of epoxy base, epoxy hardener and specially graded aggregate. The components are supplied in the correct mix proportions designed for whole pack mixing on site and no other materials should be added.

### Specification

Where shown on the contract documents, the epoxy resin, free flow grout shall be Expangrout\* EPGP by Expanchem Fospak. The cured material shall exhibit a minimum compressive strength of 80 N/mm<sup>2</sup>; a minimum flexural strength of 17 N/mm<sup>2</sup> and a minimum tensile strength of 12 N/mm<sup>2</sup> when tested after 7 days in accordance with BS 6319. The water penetration shall be Nil after 7 days, when tested in accordance with DIN 1048 : Part 5 : 1991.

### Properties

<b>Usable life</b>	: 2 hrs. @ 25°C 1 hr. @ 35°C
<b>Maximum flow 100mm head @ 35°C</b>	: 1000mm with 35mm gap 1800mm with 70mm gap
<b>Water penetration DIN 1048: Part 5 :1991</b>	: Nil (after 7 days)
<b>Rapid chl. permeability AASHTO T 277-83</b>	: Negligible
<b>Compressive strength @ 35°C. (BS 6319 : Part 2)</b>	: 80 N/mm <sup>2</sup> @ 7 days
<b>Flexural strength . (BS 6319 : Part 3)</b>	: 17 N/mm <sup>2</sup> @ 7 days
<b>Tensile strength . (BS 6319 : Part 7)</b>	: 12 N/mm <sup>2</sup> @ 7 days

### Application instructions

#### 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 75mm on the pouring side and 25mm 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\* EPGP 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 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.

##### *Base plate*

If delay is likely before placing steel base plates, it is recommended that the underside and edge are coated with Expanprime\* 25\* primer to prevent rust formation and ensure bonding with the Expangrout\* EPGP grout. Expanprime\* 25 can be applied directly onto newly cleaned steel surfaces even if they are damp. All surfaces must be substantially dry. All free standing water must be removed.



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### Mixing

The entire contents of the hardener 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.

### Placing

Place the grout within the pot life of the material. After this time, unused material will have stiffened and should be discarded.

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 with Expanchem Solvent 102\* immediately after use.

### Limitation

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

### High temperature working

For temperatures above 35°C, special procedures need to be adopted, refer to your local Expanchem Fospak office for further advice.

### Estimating

#### Supply

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**Expangrout\* EPGP** : 14 litre packs

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**Expanprime\* 25** : 1 and 4 litre pack

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**Expanchem Solvent 102** : 5 litre packs

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### Storage

Expangrout\* EPGP has a shelf life of 12 months if kept in a dry, cool store in the original unopened package.

### 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. No smoking. Use in well ventilated areas away from sources of heat and naked flames.

#### Flash points

**Expanprime\* 25** : 39°C

**Expanchem Solvent 102** : 33°C

#### Technical support

Expanchem Fospak offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

For further information on any of the services or other products offered by Expanchem Fospak, please consult your local Expanchem Fospak office, as below.



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\* Denotes the trademark registered.

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