

# Expangrout\* 100

## Plasticised expanding grout admixture

### Uses

Expangrout\* 100 is an admixture for cementitious grout where a reduced water:cement ratio and positive expansion is required. Application include bed grouting, non-shrink infilling and jointing.

### Advantages

- Gaseous expansion system compensates for plastic shrinkage and settlement in properly designed cementitious grout
- Reduced water:cement ratio in the grout mix, ensures low permeability and long term durability in service
- Gives high grout fluidity with low water:cement ratio, thus making placement or injection of the grout easy
- No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout
- Composition allows high early strength development in grout, without the use of chlorides.

### Standards compliance

Expangrout\* 100 is a suitable pre-stressing grout admixture when complying with BS 8110 Part 1, 1985, section 8.9.4.6.

### Description

Expangrout\* 100 is supplied as a powder admixture. The material is a combination of a plasticizing agent and a gas producing expansion medium. The plasticizing agent allows the use of a reduced water:cement ratio with consequent increased strength and durability. The expansive medium counteracts the natural settlement and plastic shrinkage of the grout and aids stability and cohesion.

Sufficient restrained expansion is developed to ensure a high degree of interfacial contact.

### Supplier specification

All grouting (Specify details and areas of application) must be carried out using a cement based grout, incorporating Expangrout\* 100 manufactured by Expanchem Fospak and applied strictly in accordance with the manufacturer's technical data sheet.

### Technical support

Expanchem Fospak provides a technical advisory service for on-site assistance and advice on admixture selection, evaluation trials and dispensing equipment.

### Specification

#### Performance specification

All grouts must be carried out with a cement based grout incorporating a plasticizing, expanding powder admixture. The admixture must be iron-free and chloride free and shall be added to the grout in the proportions 225 grams of admixture per 50 Kg. of cement. The admixture shall provide an expansion of up-to 4% in the plastic grout, by means of a gaseous system. The admixture must be stored, handled and mixed strictly in accordance with the manufacturer's instructions.

#### Properties

**Chloride contents** : Nil to BS 5075

**Expansion characteristics** – The controlled positive expansion in unset grouts incorporating Expangrout\* 100 overcomes plastic settlement when measured in accordance with ASTM C827, and unrestrained expansion of up-to 4% is typical.

**Time of expansion** – 15 minutes – 2 hours, temperature above 20 °C may slightly reduce these times.

**Setting times** – Expangrout\* 100 does not significantly affect the setting times of cement based grout.

**Compressive strength** – The plasticizing action of Expangrout\* 100 allows reduction of water:cement ratio of cementitious grout whilst maintaining flow properties. This gives improvement in strength and long term durability when cured under restraint.

**Compatibility** - Expangrout\* 100 is compatible with all types of Portland cement. Expangrout\* 100 may be used in mixes containing certain other Expanchem admixtures, consult Expanchem Fospak for further information.

#### Instruction for use

##### Mixing

For quantity up-to 50 Kg. a slow speed drill fitted with a high shear paddle is suitable. Large quantities will require a high shear vane mixer.

It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity.

The selected water contents should be accurately measured and added into the mixes. Slowly add the cement and sand if required and Expangrout\* 100. Mix continuously for 5 minutes, making sure that a smooth even consistency is obtained.

### Application

Areas to be grouted should be prepared to ensure substrates are clean, sound, and then pre-soaked. The unrestrained surface area of the grout must be kept to a minimum. Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process. Adopt usual placing or pumping procedures ensuring a continuous operation.

### Curing

On completion of the grouting operation, any exposed area which are not to be back should be thoroughly cured by means of water application, Expancure\* curing membrane or wet hessian.

### Cleaning

Grout mixed with Expangrout\* 100 should be removed from tools and equipment with clean water immediately after use. Remove cured material mechanically or with Expanchem Acid Etch.

### Limitation

Expangrout\* 100 is not compatible with high alumina cement.

### Packing:

**Expangrout\* 100** : 10 Kg. Bag.

### Effect of overdosing

Overdosing of Expangrout\* 100 increases expansion and may cause frothing.

### Important note

Expanchem Fospak products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Expanchem Fospak endeavours to ensure that the technical information on this data sheet is correct at the time of printing, it is the customer's responsibility to satisfy himself, by checking with the company that this information is still current at the time of use, that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended. Because Expanchem Fospak has no control over the conditions of use of its products, all recommendations or suggestions regarding the use of these products are made without guarantee.

### Dosage

OPC Sand	Concreting	Water Liter	Expangrout* 100	Approx. Yield
50 kg	NIL	20-22	225 grms.	36 liters
50 kg.	50 kg.	22-24	225 grms.	57 liters

**Note:-** For grout, mortar or concrete mixes with an aggregate/cement ratio more than 1, use 450 grams Expangrout\* 100 per 50 kg cement bag.

### Storage

Expangrout\* 100 has a minimum shelf life of 12 months provided the temperature is kept below 40°C. Should the temperature of the product fall outside this range then contact your local Expanchem Fospak office for advice.

### Precautions

#### Health and safety

It should not be swallowed or allowed to come into contact with skin and eyes.

Suitable protective gloves and goggles should be worn. In case of contact with skin or eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately do not induce vomiting.

**Fire** – Expangrout\* 100 non flammable.

### Cleaning and disposal

The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.

\* Denotes the trademark registered.