

Expangrout* TS



CONSTRUCTION CHEMISTRY

Non shrink cementitious aggregate filled grout

Uses

Expangrout* TS is used to grout gap thicknesses of 50-250mm. General pre-packaged non shrink cementitious grouts without aggregates are only suitable for gap thicknesses upto 100mm. due to the high exothermic heat generation and the consequent risk of thermal cracking. Expangrout* TS contains aggregates that reduce this heat generation making it ideally suited to thick section grouting. In pockets, volumes of 100 litres can be achieved easily with Expangrout* TS. Typical applications of Expangrout* TS are:

- thick section voids beneath base plates
- voids around below-ground tanks
- large bolt pockets

Advantages

- Non shrink and non metallic
- High compressive strength.
- Resistant to impact from dynamic and repetitive loading.
- No need to site batch aggregates.
- Highly flowable.
- Extended workability.
- Can be pumped or poured.
- Chloride free.

Description

Expangrout* TS is supplied as a ready to use dry powder. The addition of a controlled amount of clean water will produce a fluid, aggregate filled grout for pouring or pumping into large voids between structural elements.

Expangrout* TS is a blend of Portland cements, graded aggregates and additives.

The low water requirement produces a fluid grout of high strength with good workability and flow.

Specification

Where shown on the contract documents, all grouting of gap thicknesses typically 50-250mm must be carried out with the non shrink cementitious aggregate filled pre-bagged grout, Expangrout* TS, supplied by Expanchem Fospak. It shall provide a compressive strength of minimum 50N/mm² at 28 days.

Properties

Density : 2300 Kg/m³

Compressive strength : 55 N/mm² @ 28 days
BS 6319 : Part 2

Drying shrinkage

ASTM C157-93

28days : < 600 microstrain

Flow characteristics

(DTT specification)

750mm @ 20°C : less than 20 secs

750mm @ 40°C : less than 20 secs

Note : 100mm cubes, water cured at 20°C

Instructions for use

Preparation

The substrates must be free from oil, grease or any loosely adhering material. If concrete surfaces are defective or have laitence, they must be cut back to a sound base. Bolt holes and pockets must be blown clean of any dirt and debris.

Soak concrete substrates for a minimum of two hours continuously prior to placing the aggregate filled grout. Immediately prior to placing, all free water should be removed leaving the substrate in a surface dry condition.

Base Plates

Must be clean and free from oil, grease and scale. Air pressure relief holes should be provided to allow venting of any isolate high spots.

Formwork

The unrestrained surface area of the grout must be kept to a minimum. Generally the gap width between the perimeter formwork and the plate edge should not exceed 50mm on the pouring side and 50mm on the opposite side. There should be no gap at the flank sides.



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Mixing and Application

Water addition is 3litres per 25kg bag. Do not attempt part-mixes.

Upto these 25kg bags of Expangrout* TS may be mixed in a clean drum using a Expanchem Mixing Paddle MR3 fitted to a slow speed drill. Pour the water into the drum and with the paddle in motion, slowly add the contents of Expangrout* TS to the accurately measured water and mix continuously for 3-5 minutes ensuring a smooth consistency is achieved.

For larger quantities, a forced action grout mixer is recommended (eg. Creteangle). Always add powder to water. Continuous grout flow is essential and the necessary mixing equipment and labour must be made available to achieve this.

Pour or pump Expangrout* TS from one point only to eliminate the entrapment of air.

Expangrout* TS is formulated to give extended workability but must be placed within 45 minutes of mixing. If pumping, Expangrout* TS, use a piston pump (eg. Putzmeister P 13) with a minimum pump line diameter of 50mm.

Curing

All exposed areas should be cured using Expancure* continuous application of water or with wet hessian. Cleaning Expangrout* TS should be removed from all tools and equipment with clean water immediately after use.

Cured material can be removed only mechanically.

Limitations

At ambient temperatures above 35°C, the mixed grout should be placed immediately after mixing. Mixing should be employed with water below 20°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.

Estimating

Supply

Expangrout* TS : 25 kg packs

Yield

Expangrout* TS : 12.1 lit/25kg bag

Storage

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

Fire

Expangrout* TS, is non-flammable and thus presents no fire hazard.

For further information, please refer to the Product Material Safety Data Sheet for Expangrout* TS.

Sampling procedure

Cementitious grouts cannot be tested as concrete. As special sampling procedures are required, refer to your local Expanchem Fospak office for further details.

Hot weather working

Whilst the performance of Expangrout* TS 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 useable time.



Precautions

Health and safety

Contact the local Expanchem Fospak office for Health and Safety instructions. Refer to the Material Safety Data Sheets for further information.

* Denotes the trademark registered.

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