

SpEC Expand Premix

NON-SHRINK CEMENTITIOUS GROUT

DESCRIPTION

SpEC Expand Premix is a non-shrink, non-metallic cement-based grout supplied in powder form. The addition of clean mixing water provides a mix with optimum volume stability suitable for a wide range of grouting and filling applications.

TYPICAL USES

SpEC Expand Premix may be used in applications where a fine, shrinkage-free grouting and filling mix is required. Such applications include, but are not limited to:

- Grouting machinery and equipment stands
- Packing column bases, bearing plates, etc
- Filling anchor bolt holes and post pockets
- Filling precast unit joints, block-outs, etc
- Grouting post-tensioning ducts
- Floor patching

ADVANTAGES

- High compressive, flexural and bond strengths
- Free of chlorides, nitrates and other accelerating chemicals
- Non-corrosive - will not affect rebars, base plates, stands, pre-stressing ducts, posts, etc
- Wide application range - earth-dry, plastic or flowable consistency
- Excellent workability without segregation

RELEVANT STANDARDS

U.S. Corps of Engineers CRD-C621-82A
ASTM C1107

TECHNICAL DATA

Plastic Mix

Compressive strength

(BS 1881: Part 116: 1983)

1 day	18N/mm ²
3 days	32N/mm ²
7 days	40N/mm ²
28 days	46N/mm ²

Setting time @ 30°C

Initial	80 mins
Final	145 mins

Fresh wet density 2,050kg/m³

Mixing water/25kg bag 3.1 to 3.3 litres

Fluid Mix

Compressive strength

(BS 1881: Part 116: 1983)

1 day	10N/mm ²
3 days	22N/mm ²
7 days	29N/mm ²
28 days	35N/mm ²

Setting time @ 30°C

Initial	80 mins
Final	145 mins

Fresh wet density 2,070kg/m³

Mixing water/25kg bag 3.6 to 3.8 litres

APPLICATION

Preparation

It is essential that adequate preparation is carried out prior to the application of **SpEC Expand Premix**. This preparation should ensure the removal of all grease, oil and all loose material.

To avoid quick absorption of the mixing water and reduction in flow, it is essential that the substrate is saturated with clean water prior to the grouting. Before placing the grout, any water remaining on the surface must be removed by blowing with clean and oil-free compressed air.

When grouting base plates, it is essential that the underside of the plates be clean and free of oil, grease, rust, etc. The underside should preferably have no geometry which may impede grout flow. Should cruciforms be present, it is essential that air release holes be drilled through the plate to release

any trapped air, thus avoiding reductions in total contact area.

Where formwork is used, it should be properly sealed using compressible tapes to prevent grout loss. On base plates the formwork should be securely tied to the plate, leaving a 100mm wide gap at the pouring hopper and a 50mm wide gap at the opposite end.

Mixing

Important: The product cannot be mixed manually. **SpEC Expand Premix** must be mixed using a slow speed (300-350 rpm) electric drill with a suitable paddle attachment. For very large quantities, contact manufacturer's representative on use of grout pumps. In all cases, good planning is necessary to ensure a continuous flow of grout once pouring commences.

Measure the prescribed quantity of water (see Technical Data) in a graduated vessel and pour into a suitable mixing container. Add the bagged powder slowly whilst mixing for not less than 5 minutes to ensure adequate dispersal of the ingredients, paying attention to the sides and bottom of the container. Start with the minimum quantity of water and add more if necessary during mixing.

Placing

The mixed grout must be used immediately and certainly not later than 20 minutes after mixing. Again, good planing is imperative to ensure adequate supply of mixed grout and continuity of placing. Grout shall always be poured from the hopper side only, and under no circumstances from more than one side. For base plates, a suitable fluid head shall be maintained until the end of the grouting operation in order to avoid air entrapment.

CURING

Once grouting has been completed, all exposed areas must be cured using the wet hessian method or by applying **SpECcure AC** curing membrane. Wet hessian curing should continue for a full 7 days.

Proper curing is essential in order to obtain the desired results.

APPLICATION TEMPERATURE RANGE

Minimum	5°C
Maximum	35°C

In hot weather, cooled mixing water may be used for best results.

EQUIPMENT CLEANING

Tools and equipment should be cleaned immediately using water. Cured material can only be removed mechanically.

PACKAGING & YIELD

SpEC Expand Premix is supplied in 25 Kg bags. When mixed with the recommended quantities of water, each bag will provide approximately 13.5 litres of mixed material.

STORAGE & SHELF-LIFE

The material has a shelf life of 12 months when stored off the ground in dry and cool conditions. Discard any open or damaged bags.

HEALTH & SAFETY

SpEC Expand Premix contains alkalis, and protection should be provided to prevent contact with skin and eyes. Dust inhalation must be avoided during mixing. It is strongly recommended to wear gloves, goggles and dust mask while mixing and using the product. Skin contact shall be washed immediately with plenty of soap and water. Contact with eyes shall be washed immediately with copious amounts of clean water, followed by medical attention.

Dispose of all waste in accordance with the local environmental regulations.

Other SpEC Grouting Products:

- **SpEC Flo Grout 70** - Non-shrink pourable cementitious grout for industrial applications
 - **SpECgrout C1** - High strength shrinkage compensated cementitious grout
 - **SpECgrout C2** - High fluidity shrinkage compensated cementitious grout
 - **SpECgrout C3** - Thick section shrinkage compensated cementitious grout
 - **SpECgrout E** - Range of epoxy resin grouts
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