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SpEC

SpECgrout C2

HIGH FLUIDITY, SHRINKAGE COMPENSATED CEMENTITIOUS GROUT

DESCRIPTION

SpECgrout C2 is a pre-bagged, one part cementitious grout. After the addition of clean water, the material produces a free-flowing grout, which provides maximum contact area to the structure being grouted. This is due to the unique shrinkage compensation system utilised in the manufacturing process.

TYPICAL USES

SpECgrout C2 may be used in all grouting applications, where maximum contact area is required and where high flow characteristics are desired, such as during the installation of:

- Anchor bolts
- Precast units
- Crane rails
- Turbines
- Generators
- Pressing and milling machines
- By altering the material's consistency, other operations may be carried out, for instance, filling holes due to formwork ties

ADVANTAGES

- Unique non-metallic shrinkage compensation provides maximum contact between baseplate and hardened grout
- Consistent high performance
- Extremely high flow characteristics with excellent retention of flow, even at high ambient temperatures
- Suitable for placing by pump
- High bond strength to steel and concrete
- High compressive strength at early stages allowing minimal downtime on machinery
- Good impact and fatigue resistance
- Micro silica content enhances strength and durability
- Extremely low permeability

RELEVANT STANDARDS

U.S. Corps of Engineers CRD-C621
ASTM C1107M
BS EN 12390-3
BS EN 196-3
ASTM C469-02

TECHNICAL DATA

Typical results @ 20 °C

(25kg bag + 7.25 litres of water)

Compressive strength (ASTM C109)

3 Days	45 N/mm ²
7 Days	52 N/mm ²
28 Days	67 N/mm ²

Flexural strength (ASTM C348)

28 Days	8.4 N/mm ²
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Setting time (ASTM C403)

Initial set	5.5 hours
Final set	6.5 hours

Flow Characteristics (Efflux time)

CRD-C Cone (ASTM C939) 20 - 24 secs

Young's Modulus (ASTM E111) 30k N/mm²

Fresh Wet Density (ASTM D1475) 2000 kg/m³

Gap width

Minimum	10mm
Maximum	100mm

APPLICATION

Preparation

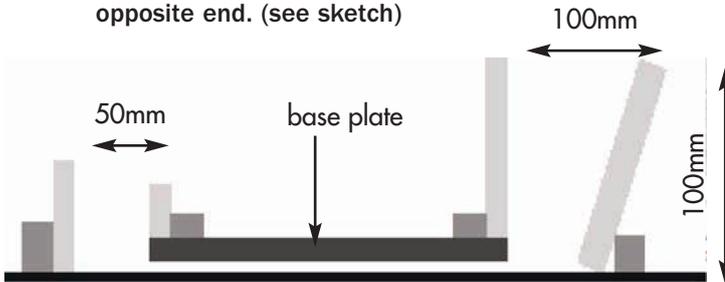
It is essential that adequate preparation is carried out prior to the application of **SpECgrout C2**. This preparation should ensure the removal of all grease, oil and loose material.

To avoid absorption and reduction in flow characteristics, it is essential that the prepared substrate is soaked with clean water for a few hours prior to grouting. Prior to placing the grout, any water remaining on the surface should be

removed by blowing clean with oil free compressed air.

The underside of the base plate to be grouted should be clean and any oil or grease **MUST** be removed. The underside should preferably have no geometry, which would impede the flow of grout. Should cruciforms be present, it is essential that air release holes are drilled through the base plate to avoid trapping air hence reducing the total contact area.

All formwork should be sealed to prevent loss of grout during pouring. The formwork should be tight to the base plate and parallel to the direction of flow. A gap of around 100mm is required at the pouring hopper with a gap of around 50mm at the opposite end. (see sketch)



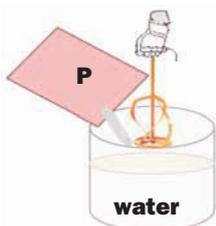
Cross-section of typical grouting formwork

Mixing

SpECgrout C2 is a one-part cementitious grout.

SpECgrout C2 must be mixed using a slow speed electric drill fitted with a **SpECgrout** mixing paddle. This method is suitable for small quantities. For larger quantities it may be necessary to consider the use of a grout pump. Advice can be provided by our Technical Service Department on the type of pumps available.

Good planning is essential to ensure a continuous flow of grout once pouring commences.



The specified water quantity should be measured in an accurately graduated vessel and added to the mixer. The bagged powder is then added slowly whilst mixing. A mixing time of not

less than five minutes is required to ensure adequate dispersal of the ingredients.

The recommended water used per 25kg bag is 7.25 litres.

The product cannot be mixed by hand

Application

The grout should be poured immediately after mixing and certainly not more than 20 minutes after mixing is complete, to take full advantage of the high flow properties.

Again, planning is imperative to ensure that sufficient grout is available to allow continuity of placing.

The mixed product should always be poured from the hopper end of the formwork. On no account should grout be poured from more than one side of the base plate. Maintenance of a fluid head is essential to avoid air entrapment. Once the grouting has been completed, all exposed areas of grout should be cured immediately using **SpECcure WE** curing membrane.

EQUIPMENT CLEANING

Tools and equipment should be cleaned immediately using water as, on hardening the material can only be removed mechanically.

APPLICATION TEMPERATURE RANGE

Minimum	5°C
Maximum	35°C

At temperatures above this range the material should be stored in shade and cool water used for mixing.

PACKAGING AND YIELD

SpECgrout C2 is supplied in 25kg bags. Each bag when mixed with 7.25 litres of water will provide approximately 16.0 litres of mixed material.

STORAGE AND SHELF LIFE

SpECgrout C2 has a shelf life of 12 months when stored in a cool, dry environment.

HEALTH AND SAFETY

SpECgrout C2 contains alkalis and protection should be provided to prevent contact with skin and eyes. Inhalation of dust must be avoided whilst mixing. Gloves, goggles and a dust mask

must be worn. If skin contact occurs wash with plenty of soap and water. Contact with eyes should be treated by immediately washing with copious amounts of clean water followed by medical attention.

Issue 11B: 05/2017

QA-054

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