

SpECgrout C1

HIGH STRENGTH, SHRINKAGE COMPENSATED CEMENTITIOUS GROUT

DESCRIPTION

SpECgrout C1 is a ready to use, one-part cementitious grout. The addition of clean mixing water, produces a non-shrink grout of predictable performance.

TYPICAL USES

SpECgrout C1 may be used in grouting applications, where a fluid/flowable grout is required and where consistency of performance is essential. Typical applications are as follows:

- Anchor bolts
- Turbine base plates
- Generator base plates
- Pressing and milling machine base plates

ADVANTAGES

- Non-shrink
- Consistent performance
- High bond strength to concrete and steel
- High compressive strength at early ages allowing minimal downtime on machinery
- Low permeability

RELEVANT STANDARDS

U.S. Corps of Engineers CRD-C621
ASTM C1107M
ASTM C109M
BS EN 12390-3
BS EN 196-3

TECHNICAL DATA

Typical results @ 20 °C

Compressive strength (N/mm²)

	FLUID	FLOWABLE
W/P Ratio	0.29	0.24
1 Day	25.0	35.0
3 Days	44.0	50.0
7 Days	55.0	65.0
28 Days	65.0	75.0



Flexural strength

28 Days 9 N/mm²

Setting time

Initial set 6 hours
Final set 7 hours

Gap Width

Minimum 10mm
Maximum 100mm

APPLICATION

Preparation

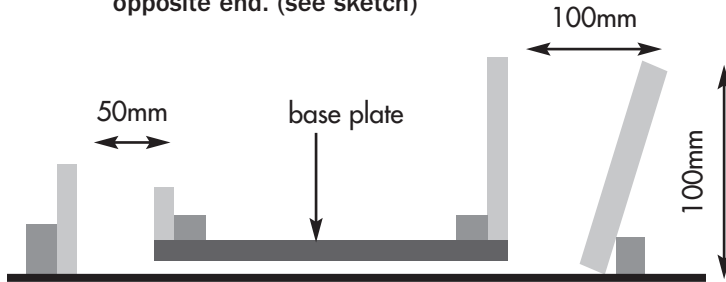
It is essential that adequate preparation is carried out prior to the application of **SpECgrout C1**. This preparation should ensure the removal of all grease, oil and loose material.

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. Before 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 consequently reducing the total contact area.

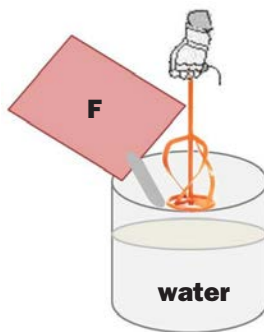
All formwork should be sealed to prevent loss of grout during pouring. The formwork should be tight to the base plate and parallel to the direction of flow. A gap of around 100mm is required at the pouring hopper with a gap of around 50mm at the opposite end. (see sketch)



Cross-section of typical grouting formwork

Mixing

SpECgrout C1 is a one-part cementitious grout.



SpECgrout C1 must be mixed using a slow speed electric drill fitted with a **SpEC Mixing Paddle**. This method is suitable for small quantities and for larger quantities it may be necessary to consider the

use of a grout pump. Please contact **SpEC Technical Department** for more advice on the type of pumps available.

The product cannot be mixed by hand

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 mixing vessel. 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 7.5 litres for fluid consistency and 6.0 litres for plastic/flowable.

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.

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.

CURING

Once the grouting has been completed, all exposed areas of grout should be cured immediately using a **SpECcure** curing membrane.

PACKAGING AND YIELD

SpECgrout C1 is supplied in 25kg bags. Each bag when mixed with 6.0 to 7.25 litres of water will provide approximately 15.5 - 16.0 litres of mixed material depending on water addition.

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.

STORAGE AND SHELF LIFE

SpECgrout C1 has a shelf life of 12 months when stored original containers in a cool, dry environment.

HEALTH AND SAFETY

SpECgrout C1 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.

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