

MonniGrout CGP

Multipurpose universal cementitious non-shrink grout

Product Description

MonniGrout CGP is composed of Portland cement, special aggregates and shrinkage controlled high performance additives. It is supplied as a dry powder in pre-weighed bags ready to use on site, which requires only addition of clean water to produce cohesive mix. MonniGrout CGP is a high quality product, non-metallic, chloride free, high strength for grouting & anchoring applications. MonniGrout CGP can be applied generally in thickness from 10 mm to 100 mm for flowable and 5-50 mm as mortar paste.

Uses

- ▶ Grouting & anchoring structural steel and precast concrete members.
- ▶ Filling voids & tie-rod holes.
- ▶ Under-plate grouting & light machine beds.
- ▶ Anchoring a wide range of fixings such as anchor bolts, stanchion bases, masts and fence posts.

Advantages

- ▶ Factory controlled pre-blend ensures consistent high quality.
- ▶ Requires only addition of water on-site at the time of usage.
- ▶ Chloride free, High early & ultimate strength and low permeability ensure the durability of the hardened grout.
- ▶ High physical and mechanical properties.
- ▶ Non-shrink characteristics.
- ▶ Gaseous expansion system compensates for shrinkage and settlement in the plastic state.

Design Considerations

MonniGrout CGP can be used at thickness between 10 and 100 mm. MonniGrout CGP can be used in 3 consistencies: Trowellable, Flowable, and fluid states by slightly adjusting water:powder ratio, the quoted values above are based on fluid consistency. The technical properties will vary slightly (positively in terms of strength) according to the chosen consistency.

When grouting under-plates or machine beds, a hopper system is needed to ensure enough pressure head exists for the grout to flow the required travel distance.

It is important to keep unrestrained grout area to a minimum to avoid cracking.

Usage Instructions

Surface Preparation

The surface should be sound, clean, free from loose material, grease, laitance, dirt curing compound, etc.

Wet the substrate to achieve a saturated and surface dry condition prior to application of MonniGrout CGP.

Erect hopper system and form-work, make sure that the shuttering is watertight by use of a polyurethane sealant such as MonniSeal PU25 or a rubber gasket seal. This step is important to insure no cement paste and water leak from the shuttering. Contact your Monneli's local representative for more technical information, Monneli's grouting detailed method statement, and CAD details.

It is essential that the base plate is clean and free from oil, grease or scale. Air pressure relief holes should be provided to allow venting of any isolated high spots.

If leveling shims are used and are to be removed after the grout has hardened, they should be treated with a thin layer of grease.

Unrestrained Surface Area

Generally the gap width between the perimeter formwork and the plate edge should not exceed 150 mm on the pouring side and 50 mm on the opposite side. It is advisable where practical to have no gap at the flank sides.

Mixing

For best results a mechanically powered grout mixer should be used. When quantities up to 50 kg are used, a slow speed drill fitted with a high shear mixer is suitable. Larger quantities will require a high shear vane mixer. Do not use a colloidal impeller mixer.

To enable the grouting operation to be carried out continuously, it essential that sufficient mixing capacity and labor are available. The use of a grout holding tank with provision to gently agitate the grout may be required.

The quantity of clean water required to be added to a 25 kg bag to achieve the desired consistency is:

- Throwable = 3.00-3.25 Liters
- Flowable = 3.50-3.75 Liters
- Fluid = 4.0 - 4.5 Liters

The selected water content should be accurately measured into the mixer. The total contents of the MonniGrout CGP bag should be slowly added and continuous mixing should take place for 5 minutes. This will ensure that the grout has a smooth even consistency.

Placing

At 25°C place the grout within 20 minutes of mixing to gain full benefit of the expansion process.

MonniGrout CGP can be placed in thicknesses up to 100 mm in a single pour when used as an under-plate grout. For thicker sections it is necessary to fill out MonniGrout CGP with well-graded silt free aggregate to minimize heat build-up. Typically a 10 mm aggregate is suitable. Any bolt pockets must be grouted prior to grouting between the substrate and the base plate.

Continuous grout flow is essential. Sufficient grout must be prepared before starting. The time taken to pour a batch must be regulated to the time to prepare the next one.

Curing

On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the

use of MonniCure S water based curing compound and wrapping with polyethylene sheets.

Cleaning

MonniGrout CGP should be removed from tools and equipment with clean water immediately after use. Cured material can be removed mechanically.

Technical Data

Category	Typical Values
Compressive Strength (ASTM C109)	≥ 70 N/mm ² @ 28 days
Flexural Strength (ASTM C580)	≥ 10 N/mm ² @ 28 days
Fresh Wet Density	2.2 Kg/L
Pot Life	35 minutes
Setting Time (ASTM C953)	4 hours @ 25°C
Expansion (ASTM C940-10a)	2% - 3%
Flow Cone Efflux Time (ASTM 939-10)	25 - 35 Seconds

All values are subject to 5-10% tolerance

Standards Compliance

- ▶ ASTM C1107/1107M-14 (previously CRD621) as Grade A.
- ▶ ASTM C938-10
- ▶ Sampling as per ASTM C943
- ▶ EN 934: 2012 (testing as per EN480, EN 13395)

Consumption

MonniGrout CGP usage yields 13 liters for a 25 Kg bag

Packaging

MonniGrout CGP is supplied in 25 Kg bags.

Shelf Life & Storage

Original sealed bag of MonniGrout CGP has a shelf life of 12 months provided it is stored clear of ground in a dry and shaded place.

Health & Safety

MonniGrout CGP is alkaline and should not come into contact with skin and eyes. Avoid inhalation of dust during mixing. Gloves, goggles and dust mask should be worn. If contact with skin occurs, wash with water.

Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

MonniGrout CGP is non-flammable.

Legal disclaimer

Monneli endeavors to ensure that any advice, recommendations, information it may give, is accurate and correct. It cannot accept any liability either directly or indirectly arising from the use of its products, because it has no direct or continuous control over where or how its products are applied, whether or not in accordance with any advice, specification, recommendation or information given by us. Monneli has the right to change any of the specifications mentioned in the Technical data sheets upon its discretion without prior notification. Hard copies of TDSs are printed once or twice a year, while our technical data sheets are continuously being updated as per R&D improvements and new 3rd party testing; kindly refer to our website for the latest updated TDSs.

VER.1.2019