

StrongGrout CG300

High Performance Cement Grout

Descriptions

StrongGrout CG300 is a special cement grout, formulated from selected OPC, special cement additive, superplasticer and expanding agent. **StrongGrout CG300** is ready to use by only addition of controlled amount of water to be used for many grouting applications, which result high flow, shrinkage compensated grout with plastic expansion and no segregation.

The mixed of **StrongGrout CG300** is pumped, poured and injected to the designated areas to be grouted to flow thru very small area.

The fine cement & cement additive particles will allow to penetrate to the soil, sand or aggregate when grouting to these substrates.

When **StrongGrout CG300** mixed with high quality graded silica sands or combination of the silica sands and coarse aggregate, it will produce high strength, flowable grout or micro-concrete.

Selection of silica sands and coarse aggregate should be taken into account in this case and mixed proportion should be determined by trials and test results.

Standard Compliance.

StrongGrout CG300 has been tested in accordance to ASTM C942:1999, on Compressive Strength Test

Uses

- **StrongGrout CG300** is used in many grouting applications.
- Soil improvements : sleeve pipe injections, injection shields, soil stabilization
- Underneat concrete slabs and floors
- Tunnel constructions : injection for strengthening & compacting, backfilling injections
- Soil nailings and ground anchoring
- Civil engineering : diaphragma, pile foundations
- Grouting of space between structures
- Pre-stressed for precast concrete, injection of cable ducts

Advantages

- Easy to mix and apply
- Very flowable and flow retention
- Non-toxic and non-corrosive
- Hydrogen microgas expansion (plastic expansion)
- Impact and vibration resistant
- Suitable for pumping or pouring over a large range of application consistencies

Physical Properties

Property	Result
Comprs Strength @ 28 days ASTM C109	> 45 N/mm ² at 45% W/C > 55 N/mm ² at 40% W/C > 60 N/mm ² at 35% W/C
Expansion ASTM C940	0.6 – 2.5 %
Time of Expansion	Start : 30 min Finish : 6 hours
Fresh wet density	1,750 – 1,950 (depends on water added)

Typical test result for micro-concrete

Mix Design:

StrongGrout CG300	630 kg
Fine & coarse silica Sand	670 kg
River gravel	650 kg
Water	260 ltr

Test Method	Typical Result
Compressive Strength	34 N/mm ² @ 1 day 48 N/mm ² @ 7 days 58 N/mm ² @ 28 days
Expansion Characteristics	0.8 %
Setting Time (25 C)	Initial : 5 hours Final : 7 hours
Fresh wet density	2,210 kg/m ³



Picture : Example of Compact Grout pump set (mixer, agitator, pump) – courtesy Hanny, Germany.

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Application Instructions

Mixing

StrongGrout CG300 should be mixed by using mechanical mixing, either high speed paddle mixer or special grouting mixer to achieve homogeneous and flowable mixed grout. Used controlled amount of water as required.

Water requirements: 7.00 - 10.00 liter depending on application.

Application

After homogeneous mixing, transfer the grouting to the stirring drum or container and then pumping to the area of grouting. Placement can be done by manual pouring for manual grouting

Packing & Size

StrongGrout CG300 20 or 30 kg bag

Yield

The quantity of clean water required to add to a 20kg bag grout will depend on the applications

Yields per 20 kg bag StrongGrout CG300	13.5 liter @ 35% W/C 14.5 liter @ 40% W/C 15.5 liter @ 45% W/C 16.5 liter @ 50% W/C
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Storage

StrongGrout CG300 should be stored on pallets in dry conditions. Under this condition, product will have a shelf life of 12 months.

Precaution

StrongGrout CG300 is alkali material and should not be in contact with skin and eyes. Avoid inhalation of dust during mixing. Wear gloves, goggles and dust mask.

Technical Support

Estrong manufactures and sells wide range of high quality construction chemical products for both new and existing constructions and buildings. The company provides technical support and experienced engineers to consultants, end-users and contractors and on-site trial and technical assistance.