CEMTEC HI-FLOW GROUT

HIGH-TOLERANCE/NON-SHRINK GROUT

DESCRIPTION

CEMTEC HI-FLOW GROUT is specially designed for applications where high tolerance, high strength and high fluidity are required. It is formulated as a natural aggregate system with a shrinkagecompensating binder and is highly flowable without sacrificing strength or performance capabilities. CEMTEC HI-FLOW GROUT is formulated to provide consistent and exacting performance in critical grouting operations. where the area of the base plate is large.

FEATURES & BENEFITS

- Highly fluid and extremely placeable for easy field use
- High strength for maximum load bearing
- Non-shrink with minimum positive expansion for high-tolerance performance
- Non-bleeding and non-segregating at fluid consistency
- Does not contain any chlorides or additives which may contribute to corrosion of base structure
- Total shrinkage compensation which provides a maximum bearing surface for the greatest overall support
- Rapid strength gain to minimize turn around time for equipment regrouts
- Excellent working time at high ambient temperatures

BASIC USES

- Heavy duty grouting of machinery and equipment
- Structural columns
- Crane rails
- Bridge seats
- Bearing plates
- Anchorages

TECHNICAL INFORMATION

Typical Engineering Data

The following results were developed under laboratory conditions.

Tested at a fluid consistency 5.2 liter / 25 kg.

Compressive Strength ASTM C-109

1 day..... 4,000 psi (27 MPa)
3 days..... 6,000 psi (40 MPa)
7 days.....7,000 psi (47 MPa)
28 days..... 9,000 psi (61MPa)

Volume Changes ASTM C-1090 & CRD-C-621

1 day..... +.07%
3 days..... +.07%
7 days..... +.07%
28 days..... +.07%

Flow Rate ASTM C-939 & CRD-C-611
(defined as fluid by CRD-C-621 & ASTM C-1090)
Initial..... 16 seconds
30 minutes..... .29 seconds
60 minutes..... .31 seconds
Setting Time ASTM C-191
Initial set.....3 hours, 50 minutes
Final set..... .4 hours, 50 minutes
Flexural Strength ASTM C-78
3 days..... .1,000 psi (6.8 MPa)
7 days..... .1,200 psi (8.0 MPa)
28 days ....1,300psi (8.8 MPa)
Split Tensile Strength ASTM C-496
28 days..... .550 psi (3.7 MPa)

Stress Strain Analysis :

Tested in accordance with ASTM C-469 using (100 mm at 200 mm) cylindrical specimens.
28 day see figure 1
Young's Modulus4.1 x 10^6psi (2.8x10^4MPa)
Toughness Index vs. Plain Concrete
at fc = 5,000 psi (35 MPa).....3.4.

SPECIFICATIONS & COMPLIANCES

- Meets the requirements of CRD-C-621, Corps of Engineers Specification for Non- Shrink Grout.
- Shows positive expansion when tested in accordance with ASTM Specification C-1090, Standard Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic-Cement Grout.
- Meets the performance requirements of ASTM C-1107, Grade C, combination volume adjusting grout standard specification for packaged, dry, hydraulic-cement grout (nonshrinkable).

STRESS VS. STRAIN

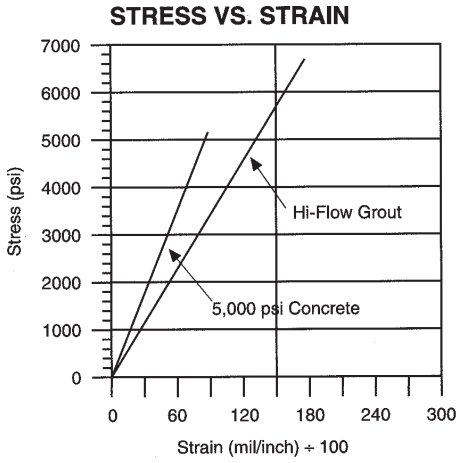

Figure 1

YIELD	yields 0.014 m^3 of fluid grout when mixed with 5 liters of water.
PACKAGING	CEMTEC CPC is packed in 25 kgs bags
COLOR	Contact CMCI tech dept.

DIRECTIONS FOR USE

The contractor and engineer are encouraged to consult and review the CMCI "Application Instructions -Cementitious Grouting". The document offers instruction detailing the CMCI manufactured cement-based grout products.

Mixing

Do not use this product at a flow cone rate of less than 20 seconds if checking flow rates on the job site (see CRD-C-611 or ASTM C-939 for flow cone method). Where CEMTEC HI-FLOW GROUT will be placed at deep thicknesses, up to 9.1 kg of pea gravel may be added to each bag of grout. Note that the water demand to achieve a certain flow level of the grout will change. Do not add sufficient water to promote bleeding of the grout.

Mixing Water Guide liter/bag

Consistency	Estimated Water Content*
Fluid	4.8 - 5.2
Flowable	4 - 4.8
Plastic	3.7 - 4.2

*Do not add water in an amount that will cause bleeding or segregation. More or less water may be required to achieve a 25 second flow or the desired placing consistency, depending on temperature and other variables. Do not add sand or cement to the grout since this action will change its precision grouting characteristics.

Placing

CEMTEC HI FLOW GROUT should be placed continuously

Curing & Sealing

Proper curing procedures are important to ensure the durability and quality of the grout. Wet cure the grout until the forms are stripped. Then, cure the grout with a high solids curing compound, such as CEMTEC KURE N SEAL or KUREKOTE 75 VOX as described in the general grouting application Instruction guide.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS & LIMITATIONS

- Proper curing is required
- Do not add admixtures or fluidifiers
- Do not use as a topping
- Employ cold weather or hot weather grouting practices as the temperature dictates.
- Shoulder cracking may occur on wide shoulders, improperly cured shoulders, or at stress points such as shimpacks, bolts or plate stiffeners. These cracks are of no structural significance.

Quality Statement
CMCI manufactures its products at their manufacturing facility in Saudi Arabia as per the Quailty Procedures centified to conform with quality Management System described in ISO 9000 series

CMCI provides a comprehensive technical support system for its full range of high erformance construction products CMCI also offers full technical field support to consultants, Architects, contractors, applicators and End Users.

"High Quality Construction Chemicals"
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