

# CEMTEC NS GROUT

**NON-SHRINK, FREE-FLOW, NON-STAIN,  
NON-METALLIC GROUT**



## DESCRIPTION

**CEMTEC NS GROUT** is designed for critical use where high strength, non-staining characteristics and positive expansion are required. It contains only natural aggregate and an expansive cementitious binder. The expansion is used on non-gas forming cementitious materials. It is extremely flowable, and when cured, appears similar in appearance to concrete.

## FEATURES & BENEFITS

- Non-staining natural aggregate for better appearance
- Non-shrink performance provides excellent bearing
- Flowable and self-leveling
- High strength
- Appearance of plain concrete
- Does not contain any added chloride ions

## BASIC USES

- Pumps and generators
- Precast gaps
- Compressors
- Filling in between Structural Pre-cast elements
- Column and Machine bases of all types
- Machine bases of all types
- Anchor bolts
- Filling in tie rod holes

## SPECIFICATION / 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).

## TECHNICAL INFORMATION

### Typical Engineering Data

The following results were developed under laboratory conditions.

### Flowable Consistency

4.2 Liter / 25 Kg

### Flow Rate : ASTM C939 & CRD C-621

120% Flow (flow table)

## Compressive Strength

50 mm cubes ASTM C 109/109M-20b

Age	Strength
3 days	5,000 psi (35 MPa)
7 days	7,000 psi (49 MPa)
14 days	8,000 psi (57 MPa)
28 days	9,000 psi (64 MPa)

### Expansion

Tested in Accordance with ASTM C 827 and positive expansion is observed.

### Tested in Accordance with CRD C-621

3 days	.01%
7 days	.06%
14 days	.05%
28 days	.06%

Linear Shrinkage-ASTM C 531-18  
-0.028%

Coefficient of Thermal Expansion - ASTM C 531-18  
 $6.7 \times 10^{-6} / 21^{\circ}\text{C}$

Modulus of Elasticity ASTM C 469/ C 469M-2014  
29600 MPa

## Fluid Consistency

5 liter / 25 kg

**Flow Rate :** ASTM C939 & CRD C-621  
20 to 30 seconds (Flow Cone)

## Compressive Strength

50 mm cubes ASTM C-109

Age	Strength
3 days	4,000 psi (28 MPa)
7 days	6,000 psi (41 MPa)
14 days	6,500 psi (45 MPa)
28 days	7,000 psi (48 MPa)

### Expansion

Tested in Accordance with CRD C-621

3 days	.01%
7 days	.06%
14 days	.05%
28 days	.06%

Setting Time ASTM C-191

Initial Set 3 hrs 5 mins.

Final Set 4 hrs 47 mins.

## Appearance

**CEMTEC NS GROUT** is a free flowing powder designed to be mixed with water. After mixing and placing, the color may initially appear much darker than the surrounding concrete. While this color will lighten up substantially as the concrete cures and dries out, the grout may always appear somewhat darker than the surrounding concrete.

<b>YIELD</b>	yields $0.014 \text{ m}^3$ of fluid grout when mixed with 5 liter of water 25 kg of <b>CEMTEC NS GROUT</b> and 11.3 kg of 9.5 mm pea gravel will yield approximately. $0.18 \text{ m}^3$ of flowable consistency grout. Use pea clean and dry gravel for deep fills only.
<b>PACKAGING</b>	<b>CEMTEC NS GROUT</b> is packaged in 25kgs bags

## DIRECTIONS FOR USE

The contractor and engineer are suggested to consult and review the CMCI "Application Instructions - Cementitious Grouting." The document offers instructions detailing the general installation of CMCI manufactured cement-based grout products. The information given here is offered in particular support to the mixing and placing of **CEMTEC NS GROUT**. This information should be used in conjunction with the Application Instructions guide mentioned above.

### Mixing

Consistency	Estimated Water Content*
Fluid	5.0 liter/25 kg
Flowable	4.2 liter/25 kg
Plastic	3.75 liter/25 kg

(Do not add excess water 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.

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 of ASTM C-939 for flow cone method)

Where **CEMTEC NS GROUT** will be placed at a thickness over 50 mm in the bolt pockets, up 11.3 kg of pea gravel may be added to each bag of grout. The aggregates shall be washed and in SSD conditions to use with the grout. Note that the water demand to achieve a certain flow level of the grout

### Placing

**CEMTEC NS GROUT** sets more rapidly than plain mortars; therefore, place quickly and continuously. If placing this product in hot weather, use of cold water will increase the working time.

### Curing and 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

### CLEAN-UP

Clean tools and equipment with water before the material hardens.

#### Quality Statement

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

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

## PRECAUTIONS /LIMITATIONS

- Do not add any admixture or fluidifiers
- Proper curing is required
- Employ cold weather or hot weather grouting practices as the temperature dictates
- Do not allow to freeze until 4000 psi (27.6 MPa) attained
- Do not use material at temperatures that may cause premature freezing.
- Shoulder cracking may occur on wide shoulders, or at stress points such as shimpacks bolts, or plate stiffeners. These cracks are of no structural significance.

TSS-2021-09-B

"High Quality Construction Chemicals"  
CONSTRUCTION MATERIAL CHEMICAL INDUSTRIES  
P.O. Box 7137, Dammam 31462, Saudi Arabia,  
Tel: 00966-13-8471450; Fax: 00966-13-8471575  
Email: tech@cmci-sa.com, Web: www.cmci-sa.com

The Technical Specification information and recommendations given are based on the current technical knowledge and the user or his representative is recommended to check the suitability of the product CMCI reserves the right to amend the technical characteristic of the product as part of ongoing research and development. As the work execution is beyond the direct and continuous control of CMCI no guaranty and or responsibility is assumed on the performance of work completion executed with use of our products.