

CHEM-GROUT NS

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

DESCRIPTION:

CHEM-GROUT NS is designed for critical use where high strength, non-staining characteristics and positive expansion are required like all types of construction joints, all types of machines bases etc. 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.

PRIMARY APPLICATION:

- Construction joints treatment
- Concrete Repairs
- Motors
- Compressors
- Generators Foundations
- Machine bases of all types
- Anchor bolts
- Column baseplates

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

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 (non shrinkable).

TECHNICAL INFORMATION:

Typical Engineering Data

The following results were developed under laboratory conditions.

Flowable Consistency

3.36 Liter / 20 Kg

Flow Rate

ASTM C939 & CRD C-621 - 20% Flow (flow table)

Compressive Strength

50 mm cubes ASTM C-109

Age Strength

3 days 5,000 psi (34 MPa)

7 days 7,000 psi (48 MPa)

14 days 8,000 psi (55 MPa)

28 days 9,000 psi (62 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%

Fluid Consistency

4 liter / 20 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.

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APPEARANCE:

CHEM-GROUT NS 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.

PACKAGING / YIELD:

CHEM-GROUT NS is packaged in 20 kg bags and yields 0.011 m³ of fluid grout when mixed with 2.8 liter of water 20 kg of **CHEM-GROUT NS**.

For deep fills only 11.3 kg of 9.5 mm pea gravel will yield approximately. 0.18 m³ of flowable consistency grout. Use clean and dry pea gravel.

DIRECTIONS FOR USE:

The contractor and engineer are suggested to consult and review with us “Application Instruction Cementitious Grouting.”

The document offers instructions detailing the general installation of Chemi Tech manufactured cement-based grout products. The information given here is offered in particular support to the mixing and placing of **GROUT**. This information should be used in conjunction with the Application Instructions guide mentioned above.

MIXING:

Consistency Estimated Water Content*

Fluid 4.0 liter/20 kg

Flowable 3.36 liter/20 kg

Plastic 3.0 liter/20 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.

Where **CHEM-GROUT NS** 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.

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 as described in the general grouting Application Instructions guide. Curing Compound must be ordered separately.

CLEAN-UP:

Clean tools and equipment with water before the material hardens.

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 shim packs bolts, or plate stiffeners. These cracks are of no structural significance.

