



NC GROUT

NON-CORROSIVE, NON-SHRINK CEMENTITIOUS GROUT

DESCRIPTION

NC GROUT is a non-shrink, non-staining grout. Its multi-flow quality allows this product to be used at various consistencies including pumping into inaccessible areas. NC GROUT may be packed, rodded, vibrated, poured or pumped. It has high compressive and flexural strengths and is non-rusting and non-corrosive.

PRIMARY APPLICATIONS

- Interior or exterior
- Machinery base plates
- Structural steel
- Columns
- Anchor bolts
- Precast structural members

FEATURES/BENEFITS

- Can be used in wet areas - will not rust
- Above or below grade
- Versatile flow capability

TECHNICAL INFORMATION

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

PROPERTY	PLASTIC CONSISTENCY	FLOWABLE CONSISTENCY	FLUID CONSISTENCY
Flow Rate (ASTM C 230)	100% (Flow Table)	135% (Flow Table)	< 30 seconds (flow cone)
Compressive Strength (ASTM C109 Modified*) 2 in (50 mm) cubes	3 days 5500 psi (38 MPa) 7 days 7500 psi (52 MPa) 28 days 8000 psi (55 MPa)	3 days 4000 psi (28 MPa) 7 days 5000 psi (34 MPa) 28 days 7000 psi (48 MPa)	3 days 3000 psi (21 MPa) 7 days 4800 psi (33 MPa) 28 days 6000 psi (41 MPa)
Expansion (CRD C 621)	3 days 0.04% 28 days 0.04%	3 days 0.04% 28 days 0.04%	3 days 0.06% 28 days 0.07%
Setting Time (ASTM C 191)	Initial: 2.5 to 3.0 hrs Final: 3.0 to 4.0 hrs	Initial: 4.0 to 5.0 hrs Final: 5.0 to 6.0 hrs	Initial: 4.5 to 5.5 hrs Final: 5.0 to 6.0 hrs

*See ASTM C 1107 Section 11.5

PACKAGING

NC GROUT is packaged in 50 lb (22.7 kg) poly-lined bags

SHELF LIFE

2 years in original, unopened package

SPECIFICATIONS/COMPLIANCES

ASTM C 1107, "Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-Shrink)"

YIELD

One 50 lb (22.7 kg) bag will yield approximately 0.43 ft³ (0.012 m³) of grout

DIRECTIONS FOR USE

Surface Preparation: Concrete surface must be structurally sound, dry, free of grease, oils, coatings, dust, curing compounds and other contaminants. Edges of concrete to be grouted that are less than 1" (25 mm) thick must be vertically cut to form a uniform edge. Smooth substrates must be abraded to ensure proper bonding. Shim and anchor support elements to prevent movement. Steel must be free of oils, greases, dirt, old coatings or chemical contaminants. Saturate the prepared area with potable water for 12 to 24 hours before application. Remove excess water from holes and voids just before placement to prevent dilution of the grout.

Mixing: NC GROUT is factory-proportioned and comes ready to use by adding only potable water. Use approximately 0.9 gal (3.4L) of water per bag of grout for a plastic consistency; approximately 1 gal (3.8L) for a flowable consistency; approximately 1.2 gal (4.5L) for a fluid consistency. For a uniform mix, use a paddle type mortar mixer. Add 2/3 of the water for the mix consistency desired into the mixer. Add the grout and mix partially. Add the remaining water to achieve the final consistency. Thoroughly mix the entire quantity for 2 to 3 minutes. Do not mix more material than can be placed in 30 minutes.

Application: All grouting should be done using established procedures and recommendations of ACI for placing and curing concrete. The method of forming must provide for rapid continuous pouring of the grout and allow a clearance of at least 3" (76mm) for entry and a "grout head" box of 4" to 6" (100 to 152 mm). Avoid air entrapment by providing adequate venting at the high point and by pouring the grout from one side only. Forms should be 1 to 2" (25 to 50 mm) above the base plate. NC GROUT must be placed by pumping, pouring, rodding or vibrating. Lengths of small link chain laid in the form before placing the grout will assist in compacting the grout and eliminating air voids. The grout must be placed and compacted within 30 minutes after mixing. In applications where grout thickness exceeds 5" (12.7cm) up to 25 lbs(11.3 kg) of 3/8" (9.5 mm) clean and damp pea gravel may be added per 50 lb (22.7 kg) bag to extend the mix. After placement, rapid drying must be prevented by covering the grout with wet burlap or by applying a membrane forming curing compound from the Euclid Chemical series of products. The forms may be removed after the grout has hardened to an initial set (see material properties). When grouting at higher temperatures, use cold water, shade the area to be grouted and protect the placed grout from direct sunlight for at least 48 hours by covering with wet burlap. When grouting at low temperatures, raise the temperature of foundation bedplate by using steam or infrared heaters. Use warm mixing water and cover the grout to retain warmth. Do not apply heat directly to the grout after its placement.

CLEAN-UP

Clean tools and equipment with water immediately following. Clean drips with water while still wet. Dried NC GROUT will require mechanical abrasion for removal.

PRECAUTIONS/LIMITATIONS

- Do not add anything but potable water.
- 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 re-temper with additional water after the mixture has started to set.
- Do not add admixtures or fluidifiers.
- Do not add sand or cement to the grout since this action will change its precision grouting characteristics.
- Do not aerate the mix.
- When necessary, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- Proper curing practices must be used.
- Apply at temperatures 40°F (4°C) and rising.
- In all cases, consult the Safety Data Sheet before use.

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