GROUTS

Master Format #: 03 62 13

NS GROUT

NON-SHRINK, NON-STAINING, NON-METALLIC GROUT

EUCLID CHEMICAL

PACKAGING

50 lb (22.7 kg) bags and pails
Code: 088 50 (bag)
Code: 088 05 (pail)
55 lb (25 kg) bags (Regional availability)
Code: 088 55

APPROXIMATE YIELD

50 lb (22.7 kg) unit: 0.45 ft^3 (0.013 m^3) per unit when mixed with 1.2 gal (4.6 L) of potable water.
Extended*: 0.60 ft^3 (0.017 m^3) per unit
55 lb (25 kg) bag: 0.50 ft^3 (0.014 m^3) when mixed with 1.3 gal (4.9 L) of potable water.
Extended*: 0.66 ft^3 (0.019 m^3) per unit
*See full extending instructions under "Directions for Use".

CLEAN UP

Clean tools and equipment with water before the material hardens.

SHELF LIFE

2 years in original, unopened package

SPECIFICATIONS AND COMPLIANCES

- CRD-C 621, Corps of Engineers Specification for Non-Shrink Grout
- ASTM C1107, "Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-Shrink)"
- Canadian MTQ

DESCRIPTION

NS GROUT is designed for critical use where high strength, non-staining characteristics and positive expansion are required. NS GROUT contains only natural aggregate and an expansive cementitious binder. It is extremely flowable. When cured, it appears similar to concrete in appearance.

PRODUCT CHARACTERISTICS

FEATURES/BENEFITS

- Non-staining natural aggregate for better appearance
- Excellent bearing
- Compatible with galvanic anodes (fluid consistency)
- Appearance of plain concrete
- Does not contain any added chloride ions
- Outstanding strength

PRIMARY APPLICATIONS

- Machine bases of all types
- Column baseplates
- Pumps and fans
- Compressors & motors
- Generators
- Anchor bolts

APPEARANCE

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 it cures and dries out, the grout may always appear somewhat darker than the surrounding concrete.

TECHNICAL INFORMATION

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

Test Method	Test Property	Flowable Consistency	Fluid Consistency
ASTM C939/ CRD-C 621	Flow Rate	120% (Flow Table)	20 to 30 seconds (Flow Cone)
ASTM C109M* 2 in (50 mm) cubes	Compressive Strength	3 days . . 4,500 psi (31 MPa) 7 days . . 6,000 psi (41 MPa) 28 days . . 8,500 psi (59 MPa)	3 days . . 3,500 psi (24 MPa) 7 days . . 5,000 psi (34 MPa) 28 days . . 6,800 psi (47 MPa)
CRD-C 621	Expansion	3 days . . . . . 0.02 % 7 days . . . . . 0.02 % 14 days . . . . . 0.03 % 28 days . . . . . 0.03 %	3 days . . . . . 0.01 % 7 days . . . . . 0.03 % 14 days . . . . . 0.05 % 28 days . . . . . 0.05 %
	Setting Time	Initial . . . . . .3 to 5 hours Final. . . . . .4 to 6 hours	
ASTM C666	Freeze-Thaw Resistance Procedure A	300 cycles 97.1%	300 cycles 97.0%

*See ASTM C1107 Section 11.5

DIRECTIONS FOR USE

Note: The contractor and engineer are encouraged to consult and review the Euclid Chemical bulletin: "Cementitious Grout Application Guide". The document offers instructions detailing the general installation of Euclid Chemical manufactured cement-based grout products. Important: If the contractor is not familiar with standard grout placement techniques, a pre-job meeting is suggested to review the project details unique to the particular job. Contact your local Euclid Chemical representative for additional information.

Mixing Water Guide gal (L)/bag

Consistency	Estimated Water Content, 50 lb bag*	Estimated Water Content, 55 lb bag*
Fluid	1.1 to 1.2 gal (4.2 to 4.6 L)	1.2 to 1.3 gal (4.6 to 4.9 L)
Flowable	0.9 to 1.0 gal (3.4 to 3.8 L)	1.0 to 1.1 gal (3.8 to 4.2 L)
Plastic	0.8 to 0.9 gal (3.0 to 3.4 L)	0.88 to 1.0 gal (3.3 to 3.8 L)

**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.*

When NS GROUT will be placed at a depth over 5" (12.7 cm), up to 25 lb (11.3 kg) of pea gravel per 50 lb (22.7 kg) bag [or 27.5 lb (12.5 kg) of pea gravel per 55 lb (25 kg) bag] must be added to each bag of grout. Note that the water demand to achieve a certain flow level of the grout will change. Once the correct amount of water has been added to a clean mixing pail, mix the grout with a high speed drill and mixing paddle for 3 minutes. Quickly transport the grout to the placement area.

Application: See the "Cementitious Grout Application Guide" for installation means and methods.

PRECAUTIONS/LIMITATIONS

- Store materials in a dry place.
- Do not add sufficient water to promote bleeding of the grout.
- Use only potable water for mixing, and do not add admixtures or fluidifiers.
- 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 C939 for flow cone method).
- The application temperature range of NS GROUT is 45 to 85 °F (7 to 29 °C).
- Rate of strength gain is significantly affected at temperature extremes.
- Do not use material at temperatures that may cause premature freezing.
- Keep the grout from freezing until a minimum strength of 4000 psi (28 MPa) is reached.
- When necessary, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- For dry pack applications, mechanically mix NS GROUT at a minimum water content of 0.5 gal per 50 lb bag (1.9L/22.7 kg) or 0.55 gal per 55 lb bag (2.1 L/25 kg).
- Add pea gravel when placing NS GROUT at a depth greater than 5" (12.7 cm).
- Proper curing is required.
- In all cases, consult the Safety Data Sheet before use.