



EUCLID CHEMICAL

NS GROUT

Non-Shrink, Non-Staining, Non-Metallic Grout

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.

Primary Applications

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

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

Technical Information

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

Property	Flowable Consistency	Fluid Consistency
Flow Rate (ASTM C939/CRD-C 621)	120% (Flow Table)	20 to 30 seconds (Flow Cone)
Compressive Strength (ASTM C109 Modified*) 2 in (50 mm) cubes	3 days 4500 psi (31 MPa) 7 days 6000 psi (41 MPa) 28 days 8500 psi (59 MPa)	3 days 3500 psi (24 MPa) 7 days 5000 psi (34 MPa) 28 days 6800 psi (47 MPa)
Expansion (CRD-C 621)	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 Set 3 to 5 hours Final Set 4 to 6 hours	

* See ASTM C1107 Section 11.5

Packaging/yield

NS GROUT is packaged in 50 lb (22.7 kg) bags, 55 lb (25 kg) bags, and 50 lb (22.7 kg) pails.

50 lb (22.7 kg) yields 0.45 ft³ (0.013 m³) of fluid grout when mixed with 1.2 gal (4.6 L) of water.

55 lb (25 kg) yields 0.50 ft³ (0.014 m³) of fluid grout when mixed with 1.3 gal (4.9 L) of water.

50 lb (22.7 kg) of NS GROUT extended with 25 lbs (11.3 kg) of 3/8" (9.5 mm) pea gravel will yield approximately 0.60 ft³ (0.017 m³) of flowable consistency grout. 55 lb (25 kg) of NS GROUT extended with 27.5 lbs (12.5 kg) of 3/8" (9.5 mm) pea gravel will yield approximately 0.66 ft³ (0.019 m³) of flowable consistency grout.

Extend with pea gravel only for deep placements over 5" (12.7 cm).

Shelf Life

2 years in original, unopened package

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.

Specifications/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

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 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 3.7 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 [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.

Clean-Up

Clean tools and equipment with water before the material hardens.

Precautions/Limitations

- Do not add sufficient water to promote bleeding of the grout.
- 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-C611 or ASTM C 939 for flow cone method).
- Do not add admixtures or fluidifiers.
- Proper curing is required.
- Do not use material at temperatures that may cause premature freezing.
- Rate of strength gain is significantly affected at temperature extremes.
- Do not allow grout to freeze until 4000 psi (27.6 MPa) is attained.
- When necessary, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- Store materials in a dry place.
- 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).
- In all cases, consult the Safety Data Sheet before use.

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