

GROUTS

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HI-FLOW METALLIC GROUT

HIGH TOLERANCE, NON-SHRINK GROUT



EUCLID CHEMICAL

PACKAGING

50 lb (22.7 kg) bags
Code: 088M 50

APPROXIMATE YIELD

50 lb (22.7 kg) unit: 0.40 ft³ (0.011 m³)
per unit when mixed with 1.2 gal (4.6 L)
of potable water.

CLEAN UP

Clean tools and equipment with water
before the material hardens.

SHELF LIFE

9 months 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)"
- Shows positive expansion when tested in accordance with ASTM C1090, "Standard Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic-Cement Grout"

DESCRIPTION

HI-FLOW METALLIC GROUT is specially designed for use where high tolerance, high strength and high fluidity are required. It is formulated as a metallic aggregate system with a shrinkage-compensating binder. It is highly flowable without sacrificing strength or performance capabilities and is formulated to provide consistent and exacting performance.

PRODUCT CHARACTERISTICS

FEATURES/BENEFITS

- Reinforced with metallic aggregate for extra heavy duty service conditions
- Highly fluid for easy field use
- High strength for maximum load bearing
- Non-shrink with minimum positive expansion for high-tolerance performance
- Non-bleeding and non-segregating at a fluid consistency
- Does not contain any chlorides or additives which may contribute to corrosion of base structure
- Total shrinkage compensation provides a maximum bearing surface for the greatest overall support
- Rapid strength gain to minimize turnaround time for equipment re-grouts

PRIMARY APPLICATIONS

- Heavy duty grouting of machinery and equipment
- Structural columns
- Crane rails
- Bridge seats
- Bearing plates

TECHNICAL INFORMATION

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

Test Method	Test Property	Fluid Consistency
ASTM C939/ CRD-C 621	Flow Rate	Initial 22 seconds 30 minutes 45 seconds 60 minutes 51 seconds
ASTM C109M* 2 in (50 mm) cubes	Compressive Strength	1 day 4,000 psi (27 MPa) 3 days 6,000 psi (40 MPa) 7 days 7,000 psi (47 MPa) 28 days 9,000 psi (61 MPa)
ASTM C1090/ CRD-C 621	Volume Change	1, 3, 7, and 28 days + 0.03 %
ASTM C348	Flexural Strength	3 days 1,000 psi (7 MPa) 3 days 1,200 psi (8 MPa) 7 days 1,300 psi (9 MPa)
ASTM C496	Split Tensile Strength	28 days 550 psi (3.7 MPa)
ASTM C191	Setting Time	Initial Set 3 hrs 50 mins Final Set 4 hrs 50 mins

*See ASTM C1107 Section 11.5

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DIRECTIONS FOR USE

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.

General Information: While HI-FLOW METALLIC GROUT is designed to be fluid poured at temperatures ranging from 40 to 100 °F (4 to 38 °C) the product is most easily placed at temperatures of 60 to 70 °F (16 to 21 °C).

Mixing: Where HI-FLOW METALLIC GROUT will be placed at a thickness over 5" (12.7cm), up to 20 lb (9.1 kg) of pea gravel must be added to each bag of grout. Note that the water demand to achieve a certain flow level of the grout will change.

Mixing Water Guide gal (L)/bag

Consistency	Estimated Water Content	Mix Time
Fluid	1.0 to 1.2 (3.8 to 4.5 L)	5 min.
Flowable	0.9 to 1.0 (3.4 to 3.8 L)	5 min.
Plastic	0.8 to 0.9 (3.0 to 3.4 L)	5 min.

**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.*

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

PRECAUTIONS/LIMITATIONS

- Store materials in a dry place.
- Proper curing is required.
- Do not add admixtures or fluidifiers.
- 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 rate on the job site.
- 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.
- Do not use as a topping.
- When necessary, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- Shoulder cracking may occur on wide shoulders, improperly cured shoulders, or at stress points such as shimpacks, bolts or plate stiffeners. These cracks are of no structural significance.
- Rate of strength gain is significantly affected at temperature extremes.
- In all cases, consult the Safety Data Sheet before use.

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