



# THE EUCLID CHEMICAL COMPANY

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## NS METALLIC GROUT



### NON-CATALYZED GROUT

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**NS METALLIC GROUT** is a factory-blended, non-shrink grout for use in critical applications. It incorporates the latest technological advances in shrinkage prevention and internal reinforcement. It is virtually non-staining and, therefore, useful in many aesthetic applications. The expansion of NS METALLIC GROUT is not dependent upon, nor accompanied by oxidation of metallic aggregate, nor is the expansion dependent on the liberation of gas. NS METALLIC GROUT is internally reinforced with specially processed iron aggregate for exceptional durability under heavy duty loading.

#### PRIMARY APPLICATIONS

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

#### FEATURES/BENEFITS

- Non-shrink - positive expansion
- Stable iron aggregate - edges will not ravel
- Does not contain added chloride
- Easily placed at fluid consistency

#### PACKAGING/YIELD

NS METALLIC GROUT is packaged in 50 lb (22.7 kg) bags. One 50 lb (22.7 kg) bag of NS METALLIC GROUT mixed with 1.0 gal (3.8 liter) of water will yield 0.38 ft<sup>3</sup> (.011 m<sup>3</sup>) of fluid grout.

#### Appearance

NS METALLIC 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 substantially as the concrete cures and dries out, the grout may always appear somewhat darker than the surrounding concrete.

#### TECHNICAL INFORMATION

##### Typical Engineering Data

The following results were developed under laboratory conditions.

##### **Test method CRD-C-621**

Fluid consistency:

1.0 gal (3.8 liter) water/50 lb (22.7 kg) bag of grout

Flow: 25 seconds on Flow Cone Method CRD-C-611

	<b>Expansion %</b>	<b>Compressive Strength</b>
1 day	---	3,500 psi (24 MPa)
3 days	+0.06	5,000 psi (34 MPa)
7 days	---	6,500 psi (45 MPa)
14 days	+0.06	--- ---
28 days	+0.06	7,000 psi (48 MPa)

#### SPECIFICATIONS/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, Grades A & B as well as Grade C, combination volume adjusting grout standard specification for packaged dry, hydraulic-cement grout (non-shrinkable).

#### DIRECTIONS FOR USE

The contractor and engineer are encouraged to consult and review the Euclid Chemical bulletin "Application Instruction-Cementitious Grouting". The document offers instructions detailing the general installation of Euclid Chemical manufactured cement-based grout products.

**Note:** 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 Company representative for additional information.

The information given here is offered in particular support to the mixing and placing of NS METALLIC GROUT. This information should be used in conjunction with the Application Instructions guide mentioned above.

**General Information-**NS METALLIC GROUT is most easily poured at temperatures of 60-70°F (16-21°C).

**Mixing:**

**Mixing Water Guide gal (liter)/bag**

<u>Consistency</u>	<u>Estimated Water Content</u>	<u>Mix Time</u>
Fluid	.85 - 1.00 (3.2 -3.8L)	5 Min.
Flowable	.80 - .90 (3.0 - 3.4L)	5 Min.
Plastic	.70 - .80 (2.6 - 3.0L)	5 Min.

Do not use a flow cone rate of less than 20 seconds if checking flow rates on the job site (see CRD-C-611 of ASTM C-939 for flow cone method).

Where NS METALLIC GROUT will be placed at a thickness over 2" (51 mm), up to 20 lb (9.1 kg) of pea gravel may be added to each bag of grout. Note that the water demand to achieve a certain flow level of the grout will change. Do not add sufficient water to promote bleeding of the grout.

**Placing-**NS METALLIC GROUT sets more rapidly than plain mortars; therefore, place quickly and continuously. If placing this product in hot weather, use of cold water will increase the working time.

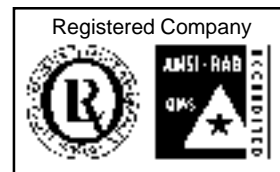
**Curing and Sealing-**Proper curing procedures are important to ensure the durability and quality of the grout. Wet cure the grout until the forms are stripped. Then, cure the grout with a high solids curing compound, such as SUPER REZ-SEAL, SUPER FLOOR COAT or SUPER AQUA-CURE VOX as described in the general grouting Application Instruction guide.

**CLEAN-UP**

Clean tools and equipment with water before the material hardens.

**PRECAUTIONS/LIMITATIONS**

- Do not use with any admixtures or fluidifiers.
- Proper curing is required.
- Employ cold weather and hot weather grouting practices as the temperature dictates.
- Do not use material at temperatures that may cause premature freezing.
- Keep the grout from freezing until a minimum strength of 4,000 psi (27.6 MPa) is reached.
- Do not use as a topping.
- Rate of strength gain is significantly affected at temperature extremes.
- Store product in a dry place.



Form NS Metallic Grout-8.01

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