

## DESCRIPTION

NON-FERROUS NON-SHRINK GROUT is a ready-to use, high strength grout. It is composed from special Portland cement with time-released expansive agent and carefully graded silica aggregate. It is effective at consistencies from extremely fluid to plastic and need not be confined in order to develop full strength. Applications include support of structural building members, such as precast wall panels, beams, columns, and heavy machinery or equipment bases.

## ADVANTAGES

- ▶ Just add water to use. Will harden free of settlement or dry shrinkage with a unique controlled expansion.
- ▶ Can be used at any consistency from fluid to plastic.
- ▶ Can be pumped into inaccessible areas.
- ▶ Appearance is very similar to natural concrete or mortar. Will not rust or stain.
- ▶ Low water/cement ratio results in early strength with exceptional bearing contact.
- ▶ For large pours, increase yield with addition of up to 25% by weight of clean, well graded aggregate.
- ▶ Contains zero volatile organic content and is safe for use both outdoors and in indoor spaces.

## DIRECTIONS FOR USE

**Surface Preparation:** Clean all surfaces of grease, oil, dirt and loose material, down to sound concrete. Roughen adjacent concrete surfaces where possible. Wet area thoroughly for 12-24 hours prior to grouting. Remove excess water before placement. Maintain ambient and surface temperatures between 40°F and 95°F (4°C and 35°C).

**Forming:** Forms must be strong, securely anchored, shored and sealed to prevent water and grout leakage. When placing provide an angle in the forms high enough to assist in grouting. For pouring minimum openings of 3" (7.6 cm) for entry and 6" (15 cm) for "head" are recommended. Forms should be at least 1" (2.5 cm) higher than the bottom of the base plate.

### Water Requirements for 50 lb (22.7 kg) bag:

MIX CONSISTENCY	PLASTIC	POURABLE	FLUID
Clean Water	3.5 qts (3.3 L)	4 qts (3.8 L)	4.5 qts (4.3 L)
Yield	0.39 cu ft (11.0 L)	0.41 cu ft (11.6 L)	0.42 cu ft (11.9 L)

For best results add dry grout to water; not water to dry grout. Temperature, mixing method, and batch size will determine the actual amount of water required to place grout correctly. Use the minimum amount of water needed for placement. Use a mechanical mixer for approximately 5 minutes to ensure a uniform mixture, and place. Mix as close to the grouting area as possible. Mix only enough grout that can be placed in 20 minutes. Working time is approximately 30 minutes at 70°F (21°C).

**Placement:** Grout must be placed continuously and from one side avoiding the entrapment of air pockets. Sufficient vent holes should be provided. Remove voids through rodding and vibrating. When grouting areas of more than 3" (7.6 cm) in depth, add up to 50% by weight washed pea gravel that is 3/8" (10 mm) or less in size. Then mix and place as outlined. Should pea gravel not be available, any placement above 3" (7.6 cm) should be done in pours 24 hours apart.

**Finishing/Curing:** Forms may be removed after the grout has hardened to an initial set and retains in shape. This time period may vary according to temperature. Protect from excessive heat and cold. Prevent rapid water loss by covering the exposed grout surfaces with wet burlap during the first 48 hours or apply a curing compound, such as PENETRON CURE.

# NON-FERROUS NON-SHRINK GROUT

## PRODUCT DATA SHEET

CEMENT-BASED, NON-CORROSIVE,  
NON-SHRINK GROUT

### TECHNICAL DATA

Data derived from laboratory tests. Actual results will vary with field conditions.

Mix Consistency	Minimum Flow (Plastic)	Moderate Flow (Pourable)	High Fluidity (Pumpable)
Flow Test	CRD-C226 at 5 drops 100 flow index	CRD-C2226 at 5 drops 124 flow index	CRD-C611 26 second flow cone
Expansion			
3 days	+0.08%	+0.04%	0.00%
14 days	+0.08%	+0.04%	+0.02%
28 days	+0.08%	+0.08%	+0.04%
Compressive Strength			
1 day	5,400 psi (37.2 MPa)	4,410 psi (30.4 MPa)	2,870 psi (19.8 MPa)
3 days	8,120 psi (56.0 MPa)	7,570 psi (52.2 MPa)	6,420 psi (44.3 MPa)
7 days	9,330 psi (64.3 MPa)	8,490 psi (58.5 MPa)	8,340 psi (57.5 MPa)
28 days	12,340 psi (85.1 MPa)	11,270 psi (77.7 MPa)	9,760 psi (67.3 MPa)

### PACKAGING

NON-FERROUS NON-SHRINK GROUT is packed in 50 lb (22.7 kg) bag.

### FREIGHT CLASS

NMFC Item No. 42140 Class 55.

### STORAGE / SHELF LIFE

12 months when stored properly in original unopened conditions. Always keep in cool/dry place unexposed to sunlight and tightly reseal container.

### SAFE HANDLING INFORMATION

Contains Portland cement and silica sand. May irritate eyes and skin. Wearing rubber gloves and safety goggles is recommended. If eye contact occurs, flush immediately with water and contact physician. DO NOT RUB EYES. Consult Material Safety Data Sheet for further information.

KEEP OUT OF THE REACH OF CHILDREN.



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NON-FERROUS NON-SHRINKAGE GROUT  
for the structural and non-structural protection  
and repair of concrete structures

Compressive strength: Class R4 ( $\geq 45$  MPa)  
Chloride content: < 0,05 % by mass  
Adhesive bond: NPD  
Restrained shrinkage, expanding: NPD  
Elastic modulus: NPD  
Thermal compatibility (Part 1): NPD  
Corrosion behaviour: deemed to have no corrosive effect  
Dangerous substances: NPD  
Reaction to fire: NPD

### WARRANTY

PENETRON INTERNATIONAL, LTD. warrants that the products manufactured by it shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON INTERNATIONAL, LTD. shall be limited to replacement of the material proven to be defective and shall in no case be liable otherwise or for incidental or consequential damages.

PENETRON INTERNATIONAL, LTD. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. User shall determine the suitability of the product for its intended use and assume all risks and liability in connection therewith.

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