

NON-FERROUS NON-SHRINK GROUT

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

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

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

Zero VOC - contains zero volatile organic compounds and is safe for use both outdoors and in confined 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° and 95°F (4°-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:

	Plastic	Pourable	Fluid
Clean Water	3.5 qt (3.3 l)	4 qt (3.8 l)	4.5 qt (4.3 l)
Yield	0.39 ft ³ (11.0 l)	0.41 ft ³ (11.6 l)	0.42 ft ³ (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.

NON-FERROUS NON-SHRINK GROUT

TECHNICAL DATA

Compressive strength (ASTM C109):

	Minimum flow (plastic)	Moderate flow (pourable)	High fluidity (pumpable)
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)

Flow test:

Minimum flow (plastic)	Moderate flow (pourable)	High fluidity (pumpable)
CRD-C226 at 5 drops 100 flow index	CRD-C2226 at 5 drops 124 flow index	CRD-C611 26 second flow cone

Expansion:

	Minimum flow (plastic)	Moderate flow (pourable)	High fluidity (pumpable)
3 days	+0.08%	+0.04%	0.00%
14 days	+0.08%	+0.04%	+0.02%
28 days	+0.08%	+0.08%	+0.04%

NOTE: Test results obtained under controlled laboratory conditions. Reasonable variations can occur due to atmospheric and job site conditions.

PACKAGING

NON-FERROUS NON-SHRINK GROUT is available in 50-lb (22.7-kg) bags.

STORAGE / SHELF LIFE

PENETRON products must be stored dry at a minimum temperature of 45°F (7°C). Shelf life is one year when stored under proper conditions.

TECHNICAL SERVICES

For more detailed instructions, alternative application methods, or information concerning the compatibility of the PENETRON treatment with other products or technologies, contact the Penetron Technical Department or your local Penetron representative.

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 Safety Data Sheet (SDS) for further information.

KEEP OUT OF REACH OF CHILDREN



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11

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

Compressive strength: Class R4 (≥ 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