



MAGNAPAK GROUT

*Dry Pack, Non-Shrink,
Non-Metallic Grout*

1. Product Description

a. **Basic Use:** MagnaPak Grout is a non-shrink, non-metallic grout designed for use under steel baseplates of all types, and grouting of hard to form precast panels, joints, and connections. It is formulated to be mixed to a damp, "dry-pack" consistency for no slump, no flow installation. Compressive strengths are significantly higher than plain concrete.

b. Features/Benefits:

- Easily placed in non-sag applications.
- Reduces forming around baseplates.
- Cures to a concrete gray color for good color match on concrete panels.
- No added chloride or corrosive agents.
- Expands as it hardens to provide non-shrink performance.
- Good for both inside and outside applications.
- Easy to use - just add water.

c. **Typical Applications:** Baseplates, horizontal boltholes, precast panel joints, shear keys, honey-combed concrete.

d. **Limitations:** Do not use MagnaPak Grout as a self leveling grout. It may be used down to 32°F (0°C) but should not be allowed to freeze until 4,000 psi (28 MPa) compressive strength is achieved. In chemically corrosive environments, use Diamite Epoxy Grouts.

e. **Composition:** MagnaPak Grout is a blend of graded aggregate, an expansive cementitious system, and a balanced chemical system that controls expansion when mixed with water.

f. **Color/Appearance:** Similar to plain concrete.

2. Packaging

MagnaPak Grout is packaged in 50-lb. (22.7 Kg) bags, 60 bags per pallet.

3. Estimating/Yield

MagnaPak Grout yields 0.41 cu. ft. (0.012 cu. m) of grout when mixed to a damp pack consistency.

4. Technical Data

a. Applicable Standards:

- ASTM C 1107, Standard Specification for Packaged, Dry, Hydraulic Cement Grout (Non-Shrink).
- ASTM C 1090, Standard Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic Cement Grout.
- CRD-C 621, Corps of Engineers Specification for Non-Shrink Grout.

b. **Compressive Strength:** ASTM C109, 2 in. (50 mm) cubes at 72°F (22°C).

<i>Age</i>	<i>Strength</i>
<i>1 day</i>	<i>4,000 psi (28 MPa)</i>
<i>3 days</i>	<i>5,000 psi (34 MPa)</i>
<i>7 days</i>	<i>7,000 psi (48 MPa)</i>
<i>28 days</i>	<i>8,500 psi (59 MPa)</i>

c. **Volume Change:** ASTM C 1090 and CRD-C 621 (Modified for no flow grouts).

<i>Age</i>	<i>Expansion</i>
<i>1 day</i>	<i>+0.02%</i>
<i>3 days</i>	<i>+0.04%</i>
<i>7 days</i>	<i>+0.04%</i>
<i>28 days</i>	<i>+0.04%</i>

d. **Setting Time:** ASTM C 191

Initial Set: 1 hour.

Final Set: 3 hours.

e. **Flexural Strength:** ASTM C 78, 28 days; 1,200 psi (8.3 MPa).

f. Specification Classifications:

- Meets CRD-C 621, type d.
- Meets ASTM C 1107, grade B.

5. Directions for Use

a. **Preparation:** Most foundations and pedestals will need at least a minimum of surface preparation before setting of the baseplate. New foundations often have a layer of laitance from bleeding or are contaminated from construction activities. Others are too smooth to achieve good bond. Old foundations being prepared for regrouting may be soiled or oil soaked. Chip, chisel,

bushhammer, or shotblast surface down to sound concrete. Any oil soaked concrete must be removed. Blow surface clean with water and compressed air. The bonding surface must be free of any coatings, paints, sealers or curing compounds.

b. Bonding: No separate bonding agent is needed. The foundation should be saturated with water before placing of grout.

c. Baseplate: Steel baseplates should be checked for cleanliness before installation over anchor bolts. Remove any oil, rust or dirt. Install plate over bolts and set to proper elevation on shim packs, leveling screws or anchor bolt nuts.

d. Ambient Conditions: Do not install MagnaPak Grout at temperatures below 32°F (0°C). Make sure foundation and baseplate are at that temperature or higher. Store dry grout and use mixing water at temperatures to get mixed grout temperatures around 70°F (21°C). In extremely hot weather, store grout in a cool environment and mix with cold water.

e. Forming: Build strong, well-braced forms that can be used as a backing for strong blows during packing operations. Make sure there is adequate access for dry pack grouting.

f. Mixing: Small jobs can be mixed a bag at a time using a mechanical drill and Metco Jiffy mixing blade with a 5-gal. (18.9 liter) pail. Larger placements should utilize a mortar mixer and 2 to 3 bags per batch. Add the water first and follow with the dry powder. Use 0.85 to 0.95 gal. (3.2 to 3.6 liter) per bag. Mix for 2 to 3 minutes to a smooth, uniform consistency. Do not add fluidifiers or other admixtures.

g. Placing: Take mixed MagnaPak Grout in small portions and force under plate or into void. Pack grout against backing form to achieve good consolidation.

Failure to consolidate will affect bearing strength. Build grout back out until entire space is filled. Bolt holes may be packed in a similar manner by hammering the grout into place with a properly fitted pipe sleeve. (Note: On anchor bolt holes, make sure holes are clean, pre-wet, and textured. Provide a 1/2 in. (12.7 mm) annular clearance around bolts. Pack grout into hole around bolt.)

h. Finishing/Curing: Maintaining of water in MagnaPak Grout is important early after placement. Cover all exposed grout with wet burlap or wet rags for 24 hours. Cure with two coats of Seal N Kure or Metcure after removal of wet cure.

i. Maintenance: No standard maintenance is needed. MagnaPak Grout may be sealed or coated with standard concrete products.

6. Availability

MagnaPak Grout is normally available immediately from your local distributor or it will be shipped within 5 working days upon receipt of order. Please contact your local Metalcrete representative or call Metalcrete directly for more information.

7. Warranty

MagnaPak Grout is manufactured in strict accordance with the quality control standards of Metalcrete Industries. It is guaranteed to perform as indicated on this data sheet when applied by competent applicators.

8. Technical Service

Metalcrete technical service representatives are available to provide on-site assistance with a minimum three day notice.



Metalcrete Industries

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