



High Strength Precision Grout

for flowable grouting applications

CONCRETE REPAIR



MarMac's ProSpec® High Strength Precision Grout is a specially formulated, ready to use, high strength, flowable precision grout for use in applications where shrinkage, corrosion, and staining are not accepted. It is shaveable, formable, and is highly proficient in overhead applications. The product can be pumped into inaccessible areas by conventional grouting methods in both interior and exterior jobs. High Strength Precision Grout combines high fluidity with early strength build, ensuring a quick job start up and thereby reducing labor costs.

Features & Benefits

- For interior or exterior applications
- Ultimate flexural strength
- High initial compressive strength
- Non-porous & high density
- Water & salt penetration-resistant
- Freeze/thaw damage-resistant
- Non-shrinking & non-staining
- Non-metallic & non-corrosive
- High fluidity makes it pumpable
- Extendable by 50% with proper aggregate





High Strength Precision Grout data sheet

Applications

- Machinery Bases
- Rolling Mills
- Anchor Bolts
- Precast Columns
- Bridge Seats
- Sole Plates
- Generators
- Transfer Lines
- Crane Rails

Availability

- Container weight: 50lb

Specifications

High Strength Precision Grout conforms to ASTM C 1107 and CRD-C621 Corps of Engineers Specification for Non-Shrink Grout. The typical properties are as follows:

TYPICAL PROPERTIES			
Approximate coverage (50 lbs)	23 ft ²	0.48 ft ³	
CONSISTENCY	PLASTIC	FLOWABLE	FLUID
Mixing water (per 50 lbs)	3.7 qt	4.0 qt	4.5 qt
Flow	120-125%	125-140%	20-30 sec
SETTING TIME (ASTM C 191)			
Initial set	5 hrs	6 hrs	6.5 hrs
Final set	5.75 hrs	7 hrs	7.5 hrs
COMPRESSIVE STRENGTH (ASTM C 109)			
24 hrs	6,000 psi	5,500 psi	4,000 psi
3 days	7,200 psi	7,000 psi	6,100 psi
7 days	8,500 psi	8,500 psi	7,500 psi
28 days	10,500 psi	10,000 psi	9,000 psi
GROUT EXPANSION (ASTM C 1090)			
24 hrs	0.04%	0.01%	0.00%
3 days	0.04%	0.02%	0.00%
28 days	0.06%	0.03%	0.00%
EXPANSION OF CEMENTITIOUS MIXTURES (ASTM C 827)			
Final set average	0.55%	1.49%	1.23%

Storage

Store High Strength Precision Grout in its original, unopened container under cool, dry conditions for up to 12 months from the date of manufacture. Keep out of direct sunlight. Prior to installation, materials should be stored between 40°F (4°C) and 80°F (27°C) for 24 hours.



High Strength Precision Grout data sheet

Installation

Preparation: All materials should be stored between 40-80°F 24 hours prior to installation. The application area must be free of unsound concrete, grease, oil, wax, sealers, paint, and any other contaminants that may act as a bond breaker. Saturate the application area with water for 12-24 hours prior, after which any excess water should be removed. Forms must be sealed to prevent water or grout escaping and provide for rapid, continuous grout placement. When placing, provide an angle in the forms high enough to assist in grouting. For pouring minimum openings of 3" for entry and 6" for "head" are recommended. Venting must be provided to avoid entrapping air. Forms should be at least 1" higher than the bottom of the base plate. Maintain ambient and surface temperatures between 40-95°F. Set times and strength developments are dependent on temperature. Hot temperatures will accelerate physical properties, while cold will have a retarding effect.

Mixing: Refer to the Typical Properties table for water requirements to reach the desired consistency. Only mix with clean, potable water and/or for thicker applications extend with clean SSD 3/8" pea gravel. Addition of cold water at high temperatures or warm water at low temperatures will aid in adjusting the mix temperature. Place 75% of desired mixing water, start mixer, then slowly add the dry material. After all of the powder has been added, slowly add the remaining 25% water until the desired consistency is achieved. Avoid adding excessive amounts of water that promotes segregation or bleeding of the grout. Mix mechanically with a high torque electric drill, do not exceed 600 rpm using a paddle type mixing blade or an appropriately-sized mortar mixer. Mix for 3-5 minutes to ensure a uniform, lump-free consistency and place immediately.

Application: Apply when air and substrate temperatures are between 40-90°F. Fluid-consistency working time is approximately 15 minutes at 70°F. Agitate the material as necessary within its working time to maintain workability. Shut down nearby machinery prior to and during placement. Provide vent holes where necessary. Pour and place the grout from one side of the form to eliminate air voids. A vibrator, rod, chain, or trowel may be used to assist in consolidating the grout and eliminating air voids. Use a mixer large enough to permit continuous placement before any part of the grout has set. Confine grout to ensure minimum surface exposure. Avoid vibration for 24 hours after placement. For placements greater than 4", extend the grout with 25 lbs of washed, clean SSD (saturated surface dry) 3/8" graded aggregate per 50 lb bag. After placement, immediately trim the surfaces and edges with a trowel. Minimum application thickness is 1". Forms may be removed after grout has hardened to an initial set.

Jobsite Testing: Jobsite strength tests must use ASTM C 1107 specifications 2" metal cube molds. Do not use cylinder molds or plastic cube molds. Control testing based on achieving the desired flow rather than water content.

Curing: Forms may be removed after the grout has hardened to an initial set and retains its shape. This time period will vary according to temperature. At this point, final finishing and curing can start. The grout should slope downward from baseplates or similar structures at a 45° angle from the lower edge. Prevent rapid water loss by covering the exposed grout surfaces with wet burlap during the first 48 hours or apply an acceptable water-based cure and seal agent.

Cleaning: Clean all tools immediately after use. Dried material must be mechanically removed.



High Strength Precision Grout data sheet

Disclaimer

The manufacturer requires that when its ProSpec® products are used in any application or as part of any system that includes other manufacturers' products, the contractor and/or design professional shall test all the system components collectively for compatibility, performance, and long-term intended use in accordance with pertinent and accepted industry standards prior to any construction. Written documents of the tests performed shall be satisfactory to the design professional and contractor. Test results must include the means and methods of application, products used, project-specific conditions being addressed, and standardized tests performed for each proposed system or variation.

Always read the complete cautionary information printed on product container prior to use. This product is not suitable for use on non-treated aluminum applications.

This product data sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about guidelines for the proper use and application of the covered ProSpec® brand product(s) under normal environmental and working conditions.

For more information, additional instructions, or questions regarding High Strength Precision Grout, visit marmac.com/Precision-Grout or scan the QR code on the first page.

CAUTION: Prior to use, please read the Manufacturer Warranty & Disclaimer found at marmac.com/cp/disclaimer.

877.962.7622 marmac.com v2.1 0823

