

# P-77 CONSTRUCTION GROUT



**Construction Grout** is a non-shrink, non-metallic structural Portland Cement material designed for high strength grouting.

## FEATURES AND BENEFITS:

- ◆ Non-corrosive, will not attack reinforcement
- ◆ Non-shrink, no loss of volume
- ◆ Non-metallic, non-staining, grey color
- ◆ Meets ASTM C 1107 Packaged Dry, Hydraulic-Cement Grout (Non-shrink)
- ◆ Meets Corps of Engineers Specification CRD-C 621
- ◆ Dry Pack, Plastic, or Flow able Consistency
- ◆ Pump able for Easy Placement

## USES:

### Grouting of:

- ◆ Concrete - poured in place, pre-cast, tilt-up, and pre-stressed
- ◆ Heavy Machinery
- ◆ Sole Plates
- ◆ Anchor Bolts
- ◆ Reinforcing Steel in Block Cells
- ◆ Steel Bearing Plates
- ◆ Concrete Columns
- ◆ Dowel Rods

## PREPARATION:

Selection of the grout is to be done by the engineer. Remove all unsound concrete, grease, oil, paint, and any other foreign material that will inhibit performance. Prior to grout placement, all surfaces must be clean and saturated with water for 24 hours. Remove excess water before placing the grout. Provide air relief holes where necessary if grouting is beneath structural system

## PREPARATION CONTINUED:

### Suggestions in Form Work

Wood form work or other absorbent forms should be coated with a form release oil to prevent grout adherence and excessive water absorption. Design form work to facilitate rapid, continuous and complete filling of the space to be grouted.

Use methods that will enable the grout to flow by gravity between the surfaces and keep the grout in full contact with these surfaces until it has hardened.

For dry pack application, refer to:

Portland Cement Association-- Cementitious Gouts and Grouting (EBI 11 .01T).

The form work must be rigid and well secured to withstand the impact of grout placement.

## MIXING:

Add only clean water. The water quantities shown are approximate and may vary slightly with type of equipment and application conditions. For optimum application and product performance:

	Mix Temperature At time of placement	Storage for 12 -24 hrs prior to mixing
Standard	60° F - 70° F	60° F - 70° F
Metric	15.5°C -21.1°C	15.5°C -21.1°C

Hot weather application (90° F) (32.2° C)	Cold weather application (50° F) (10.0° C)
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### Water Temperature

Standard	45° F --	80° F
Metric	7.2° C --	26.6° C

Water demand and mix temperature must be determined using standard test methods for consistency and temperature measurement at the time of application.





## PRODUCT INFORMATION

### CONTINUED:

#### Desired Grout Consistency

##### **Plastic (Trowel Consistency)**

	<u>Grout</u>	<u>Water</u>	<u>Yield</u>	<u>Unit Wt.</u>
Standard	55 lbs.	7 pt.	.50 Cu. ft.	125 lbs. Cu.ft.
Metric	24.9 kg	3.98 L	0.014 cm <sup>3</sup>	56.75 kg/rn <sup>3</sup>

##### **Flow able (Pumping Consistency)**

Standard	55 lbs.	1 Gal	.51 Cu. ft.	126 lbs. Cu.ft.
Metric	24.9 kg	4.546 L	0.014 cm <sup>3</sup>	57.2 kg/rn <sup>3</sup>

Use a mixer larger enough to permit continuous placement before any part of the grout has set.

### PLACEMENT:

Place the grout quickly. Rodding the grout lightly will help remove air bubbles. Avoid vibration which can cause bleeding and segregation. Shut down nearby machines.

#### Placement Temperature

	<u>Minimum</u>	<u>Maximum</u>
Substrate	50° F (10.0 C)	90° F (32.2 C)
Mix	60° F (15.5 C)	70° F (21.1 C)
Air	50° F (10.0 C)	90° F (32.2 C)

### CURING:

Forms may be removed as soon as the grout is firm and cannot be penetrated by a pointed masonry trowel. Exposed shoulders can be left in place or trimmed. After the forms are removed, prevent evaporation by keeping the exposed surfaces wet for several hours. Protect from freezing for a minimum of 48 hours after placing. Construction Grout can be exposed under normal weather conditions. For installations where acids and sulfates are present, a protective coating is required.

Cure per Portland Cement Association-Design and Control of Concrete Mixes (EBOO1 .12T) and/or American Concrete Institute 308 - Standard Practice for Curing Concrete.

### TECHNICAL DATA:

	<u>Plastic</u>	<u>Flow able</u>
Water	13 %	15%

#### Compressive Strength ASTM C 942

24 hours	3,400 psi (23.4)	2,200 psi (15.1 mpa)
3 days	6,700 psi (46.2)	6,500 psi (44.8 mpa)
7 days	7,800 psi (53.7)	7,400 psi (51.0 mpa)
28 days	9,000 psi (62.0)	8,800 psi (60.6 mpa)

#### Set Time ATMC C 191

Initial	4:40	5:30
Final	6:30	7:30

#### Consistency Flow ASTM C 230 113 141

#### Volume Change, % Expansion ASTM C 827

At final set	+0.38	+0.08
After 24 hours	+0.30	+0.04

#### CRD-C 621

3 days	+0.07	+0.07
7 days	+0.07	+0.07
14 days	+0.07	+0.05
28 days	+0.07	+0.05

### LIMITATIONS:

- ◆ **DO NOT** mix more than can be placed in 15 minutes.
- ◆ **DO NOT** re-temper.
- ◆ **DO NOT** add excessive amounts of water.
- ◆ **DO NOT** use vibrators in placing the grout.
- ◆ **DO NOT** add any other materials.
- ◆ **DO NOT** apply on substrates that are frozen or contain frost.





## PRODUCT INFORMATION

### CONTINUED:

**COLOR:** Grey

### COVERAGE:

1 cu. ft. (0.028 m<sup>3</sup>): 2 bags/110 lbs. (50 kg)  
1 cu. yd. (0.76 m<sup>3</sup>): 54 bags/2970 lbs (1348 kg)  
100 sq. ft. (2.8 m<sup>2</sup>) @ 1" (2.5 cm): 17 bags/935 lb. (424 kg)

**PACKAGING:** 55 lb. (24.9 kg) multiply bag

**SHELF LIFE:** One year from date of manufacture.

### TECHNICAL SERVICE:

For application procedures or surface conditions not specified in literature contact:

Paragon Building Products Inc.  
2895 Hamner Avenue  
Norco, CA 92860  
Phone: 951-549-1155  
Fax: 951-549-1177

Avoid hazards by following all precautions found in the MSDS (Material Safety Data Sheet), product labels and product information sheets. Please read this information prior to using the product.

### CAUTION:

Contains Portland Cement. Cement causes skin irritations, may cause allergic reactions. Avoid eye contact or prolonged contact with skin. Use of a dust respirator, safety goggles and rubber gloves are recommended. Wash self thoroughly after any contact. In case of eye contact, flush immediately with plenty of water for at least 15 minutes. Consult a physician immediately. Do not take internally. Contains free silica; don't breath dust. Prolonged exposure to dust may cause delayed lung disease (silicosis). Always wear NIOSH approved mask for silica dust.

### LIMITED WARRANTY:

Paragon Building Products, Inc. (**Paragon**) warrants that this product and the materials used therein meet or exceed the applicable ASTM standards listed and in force at the time of manufacture. Paragon will replace any product or part which proves defective due to quality of ingredients used or due to the manufacturing process itself. This warranty shall apply only if the product is used in strict accordance to applicable specifications and instructions provided by Paragon for its use, and Paragon shall not be liable otherwise. Replacement of any defective product or, at Paragon's option, refund of the purchase price of any defective product shall be the buyer's sole remedy under this warranty, and Paragon shall in no event be liable for any damages in excess of the purchase price of the defective product.

**PARAGON SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES.**

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