

B-6 Construction Grout

BONSAL® B-6 Construction Grout is a high strength, nonshrink, nonmetallic precision Portland Cement material designed for high performance grouting.

FEATURES AND BENEFITS:

- High Strength Precision Grouting
- Noncorrosive, Will Not Attack Reinforcement
- Nonshrink, No Loss of Volume
- Nonmetallic, Non-Staining, Grey Color
- Meets ASTM C 1107 Packaged Dry, Hydraulic - Cement Grout (Nonshrink)
- Meets Corps of Engineers Specification CRD-C 621
- Plastic, Flowable or Fluid Consistency
- Pumpable, for Easier Placement in Difficult and Low Clearance Installations
- Super Plasticized for Ultimate Strength

USES:

High Strength Precision Grouting OF:

- Concrete - poured in place, precast, tilt-up and prestressed
- Heavy Machinery
- Steel Bearing Plates
- Sole Plates
- Concrete Columns
- Anchor Bolts
- Dowel Rods
- Reinforcing Steel in Block Cells

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 systems.

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.

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, the mix temperature should be 60°F (15.5°C) to 70°F (21.1°C) at time of placement.

MIXING (Cont.):

This can be done when applying at temperature extremes by storing B-6 Construction Grout bags at 60°F (15.5°C) to 70°F (21.1°C), 12 to 24 hours prior to mixing. Addition of cold water (45°F) (7.2°C) at high temperatures (90°F) (32.2°C) or warm water (80°F) (26.6°C) at low temperatures (50°F) (10.0°C) will also aid in adjusting the mix temperature.

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

Desired Grout Consistency

Plastic (Trowel Consistency), 55 lbs. (24.9 kg) Grout, approximately 1.1 Gallon (4.61 l) Water will yield 0.51 cu. ft. (.014m³) with a Unit Weight of 126 lbs./cu. ft. (2018 kg/m³)

Flowable, 55 lbs. (24.9 kg) Grout, approximately 1.25 Gallon (4.73 l)

Water (10.4 lbs.) (4.7 kg) will yield .52 cu. ft. (0.014 m³) with a Unit Weight of 125 lbs./cu.ft. (2002 kg/m³)

Fluid (Pumpable Consistency), 55 lbs. (24.9 kg) Grout, approximately 1.50 Gallon (5.6 l) Water will yield 0.54 cu. ft. (15 l) with a Unit Weight of 123 lbs./cu. ft. (1970 kg/m³)

Use a mixer large 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

	Minimum	Maximum
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.

B-6 Construction Grout can be exposed under normal weathering conditions.

CURING (Cont.):

For installations where acids and sulfates are present, a protective coating is required.

Cure per Portland Cement Association - Design and Control of Concrete Mixes (EB001.12T) and/or American Concrete Institute 308 - Standard Practice for Curing Concrete.

TECHNICAL DATA:

	<u>Plastic</u>	<u>Flowable</u>	<u>Fluid</u>
	17.75%	19.0%	23.0%
	Water	Water	Water
<u>Compressive Strength (psi)</u>			
ASTM C 942			
24 hours	3,000 (20.68 Mpa)	2,700 (18.52 Mpa)	2,500 (17.14 Mpa)
3 days	8,400 (57.61 Mpa)	7,500 (51.44 Mpa)	5,800 (39.78 Mpa)
7 days	10,300 (70.64 Mpa)	9,300 (63.78 Mpa)	7,300 (50.07 Mpa)
28 days	11,500 (78.87 Mpa)	10,300 (70.64 Mpa)	8,700 (59.67 Mpa)

Set Time

ASTM C 191

Initial	2:15	5:00	5:15
Final	5:15	6:15	7:45

Consistency Flow

Flow ASTM C 230

	112	134	N/A
Cone ASTM C 939	N/A	N/A	21 sec.

Volume Change, % Expansion

ASTM C 827

At time of set	+ .21	+ .43	+ .30
After 24 hrs.	+ .13	+ .35	+ .33

Volume Change, % Expansion

CRD-C 621

3 days	+ .05	+ .05	+ .05
7 days	+ .05	+ .02	+ .05
14 days	+ .03	+ .02	+ .05
28 days	+ .03	+ .02	+ .05

LIMITATIONS:

- **DONOT** mix more than can be placed in 15 minutes.
- **DO NOT** retemper.
- **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.

COLOR: Grey

COVERAGE:

1 cu. ft.(0.028m³): 2 bags/110 lbs. (50 kg)
1 cu. yd.(0.76 m³): 54 bags/2970 lbs. (1348 kg)
100 sq. ft. (2.8 m³)@ 1"(2.5 cm): 17 bags/935 lbs. (424 kg)

PACKAGING:

55 lb./24.9 kg multiply bag

SHELF LIFE:

One year from date of manufacture.

CAUTION: Contains Silicon Dioxide, Portland Cement and Calcium Hydroxide. Your skin may be sensitive to cement. Wearing rubber gloves is recommended. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water. For eyes, flush with clean water for at least 15 minutes and get prompt medical attention
KEEPOUTOF REACH OF CHILDREN.

Technical Assistance

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