



packaging

pro multi-purpose grout

1. Product Name

ASH GROVE PRO® Multi-Purpose Grout

2. Manufacturer

ASH GROVE PACKAGING GROUP
10809 Executive Center Drive, Ste. 321
Little Rock, AR 72211
Phone: (888) 289.1117
Fax: (501) 224.3882
www.ashgrovepkg.com

3. Product Description

ASH GROVE PRO® Multi-Purpose Grout is a non-shrink, nonmetallic structural Portland cement mixture designed for high strength grouting. Its non-shrink formulation maintains intimate contact with the underside of machinery base plates, ensuring a stable base capable of withstanding high loads. Also for anchoring heavy equipment, bolts and dowel bars.

BASIC USE:

Recommended for grouting of:

- Concrete – poured in place, precast, tilt-up and prestressed
- Heavy machinery
- Sole plates
- Anchor bolts
- Reinforcing steel in block cells
- Steel bearing plates
- Concrete columns
- Dowel rods

COMPOSITION & MATERIALS:

ASH GROVE PRO® Multi-Purpose Grout is a special blend of cement based construction non shrinkage grout with special additives, plasticized ingredients designed for high strength grouting applications. Just add water.

4. Advantages/Benefits

ASH GROVE PRO® Multi-Purpose Grout has several advantages and features including:

- Noncorrosive, will not attack reinforcement
- Nonshrink, no loss of volume
- Meets ASTM C-1107 packaged dry, hydraulic cement (nonshrink)
- Meets Corps of Engineers specification CRD-C 621
- Dry pack, plastic, or flowable consistency
- Pumpable for easy placement
- Super plasticized for improved strength

5. 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.

For dry pack application, refer to: Portland Cement Association - Cementitious Grouts and Grouting (EB111.01T). The form work must be rigid and well secured to withstand the impact of grout placement.

6. Mixing Instructions

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 to 70°F at time of placement. This can be done when applying at temperature extremes by storing Multi-Purpose Grout bags at 60°F to 70°F, 12 to 24 hours prior to mixing. Addition of cold water (45°F) at high temperatures (90°F) or warm water (80°F) at low temperatures (50°F) 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. grout, approximately 1.10 gallon water (9.2 lbs.) will yield 0.51cu. ft. with a unit weight of 126 lbs./cu.ft.

Flowable (Pumping Consistency), 55 lbs. grout, approximately 1.12 gallon water will yield 0.52 cu. ft. with unit weight of 125 lbs./cu. ft.

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



pro grout multi-purpose grout (cont.)

Fluid (Pumpable Consistency), 55 lbs. grout, approximately 1.25 gallon water will yield 0.53 cu. ft. with a unit weight of 122 lbs./cu. ft.

7. 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	90°F
Mix	60°F	70°F
Air	50°F	90°F

8. 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.

Multi-Purpose Grout can be left exposed under normal weathering 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 (EB001.12T) and/or American Concrete Institute 308 - Standard Practice for Curing Concrete.

9. Technical Information

ASTM SPECIFICATIONS:

- Meets requirements of ASTM C-1107 specifications when used as directed.
- Meets requirements of U.S. Army Corps of Engineers CRD-C621 specifications when used as directed.

	<u>Plastic</u>	<u>Flowable</u>	<u>Fluid</u>
Water	15%	17%	19%

Compressive Strength:

ASTM C-942

24 Hours	3,600 PSI	3,400 PSI	2,200 PSI
3 Days	7,000 PSI	6,700 PSI	6,500 PSI
7 Day	8,000 PSI	7,800 PSI	7,400 PSI
28 Days	9,500 PSI	9,000 PSI	8,800 PSI

Set Time:

ASTM C-191

Initial	4:00	4:40	5:30
Final	6:00	6:30	7:30

Consistency Flow:

ASTM C-230

105	113	141
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Volume Change, % Expansion:

ASTM C- 827	<u>Plastic</u>	<u>Flowable</u>	<u>Fluid</u>
At final set	+ .40	+ .38	+ .08
After 24 hours	+ .28	+ .30	+ .04

Volume Change, % Expansion

CRD-C-621	<u>Plastic</u>	<u>Flowable</u>	<u>Fluid</u>
3 days	+ .08	+ .07	+ .07
7 days	+ .08	+ .07	+ .07
14 days	+ .08	+ .07	+ .05
28 days	+ .08	+ .07	+ .05

10. Limitations

- **DO NOT** 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.

11. Coverage

1 cu. ft.: 2 bags per 110 lbs.

1 cu. yd.: 54 bags per 2970 lbs.

100 sq.ft. @ 1": 17 bags per 935 lbs.

12. Warning

ASH GROVE PRO® Multi-Purpose Grout contains cement. Normal safety wear such as protective clothing, boots, rubber gloves, dust masks and eye safety glasses should be worn while handling cement-based products. Material Safety Data Sheets are available upon request or at www.ashgrovepkg.com.

13. Limited Warranty

Packager, having no control over the use of the material, does not guarantee finished work. Replacement of any defective product or refund of the purchase price of defective product shall be the buyer's sole remedy under this warranty.

THIS LIMITED WARRANTY EXCLUDES ANY LIABILITY FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES.

EXCEPT FOR THE LIMITED WARRANTY MADE ABOVE, PACKAGER SPECIFICALLY DISCLAIMS AND EXCLUDES ANY OTHER EXPRESS WARRANTY, ANY IMPLIED WARRANTY OF MERCHANTABILITY OF GOODS AND ANY IMPLIED WARRANTY OF FITNESS OF GOODS FOR ANY PARTICULAR PURPOSE.

Ash Grove Packaging reserves the right to change specifications without notice.