1. Product Name
ASH GROVE PRO® Atlas Grout
Product Number: 405

2. Manufacturer
ASH GROVE PACKAGING GROUP
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3. Product Description
ASH GROVE PRO® Atlas Grout is an expansive, polymer modified fast setting cement-based anchoring grout.

BASIC USE:
Recommended for anchoring or grouting in:
- Heavy machinery
- Guard rails
- Bolts
- Ceramic fixtures
- Pipes in concrete
- Aluminum railings
- Fast-setting additive for cement
- Banisters
- Dowels
- Parking meters
- Ornamental iron
- Fence posts

COMPOSITION & MATERIALS:
ASH GROVE PRO® Atlas Grout is a scientifically formulated blend containing portland cements, graded silica sands, accelerators and proprietary raw materials uniformly blended.

4. Advantages/Benefits
ASH GROVE PRO® Atlas Grout has several advantages and features including:
- High early strength
- Sets in 10-20 minutes
- Interior or exterior
- Can be used as an additive
- Pourable
- Contains no chlorides
- No sealing required

5. Preparation
AS AN ANCHORING CEMENT
Drill a hole at least three times the width and eight to 12 times the depth of bolt or screw diameter. Actual hole size must be determined on a job to job basis by a structural engineer. Clean area and remove materials that will inhibit performance. Soak the hole thoroughly with water prior to application and remove standing water.

Note: If compatibility with railing or anchoring components is in question, make a test. Check materials to determine acceptability.

Atlas Grout can be used in contact with most materials. Particular attention is to be given but not limited to chloride penetration, corrosion of steel, galvanic activity, materials selection and compatibility, waterproofing, constructability, quality assurance and methods of application and maintenance by the owner. Prepare holes based on project design requirements. Metals such as aluminum that will corrode due to their sensitivity to alkalis must be protected.

Suggested guidelines are shown below for light anchoring projects.

<table>
<thead>
<tr>
<th>Bolt Diameter</th>
<th>(3X) Hole Diameter</th>
<th>8 – 12X Hole Depth</th>
<th># of Holes Per 10# Pail</th>
</tr>
</thead>
<tbody>
<tr>
<td>¼&quot;</td>
<td>¾&quot;</td>
<td>2&quot; – 3&quot;</td>
<td>90</td>
</tr>
<tr>
<td>½&quot;</td>
<td>1 ½&quot;</td>
<td>4&quot; – 6&quot;</td>
<td>11</td>
</tr>
<tr>
<td>¾&quot;</td>
<td>1-1/4&quot;</td>
<td>6&quot; – 9&quot;</td>
<td>3</td>
</tr>
<tr>
<td>1&quot;</td>
<td>3&quot;</td>
<td>8&quot; – 12&quot;</td>
<td>1</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>4-1/2&quot;</td>
<td>12&quot; – 18&quot;</td>
<td>25# Bag</td>
</tr>
</tbody>
</table>

ASH GROVE PRO® Atlas Grout can be used in contact with most materials. Installations subject to corrosive and cathodic environments require a protective coating of ASH GROVE PRO® Primer/Admix on components prior to installation. Coating components with ASH GROVE PRO® Primer/Admix will reduce permeability of ions in solution which may slow the effect of cathodic corrosion.

- ASTM D 4258 Surface Cleaning Concrete for Coating
- ASTM D 4259 Abrading Concrete
- ASTM D 4261 Surface Cleaning Concrete Unit Masonry for Coating
- ICRI Guideline 03730 Surface Preparation Guidelines for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Oxidation
- ICRI Guideline 03733 Guide for Selection and Specifying Materials for Repair of Concrete Surface
- ICRI Guideline 03732 Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays
- ASTM D 4580 Measuring Delaminations in Concrete Bridge Decks by Sounding
- ACI 201.1R Guide for Making a Conditions Survey of Concrete in Service

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6. Mixing Instructions
Add the dry material to the required amount of water while mixing. The fluidity, strength, and hardness depends upon the amount of water used.

Use clean water and clean tools. Use approximately 25 oz. of water per 10 lbs. of Atlas Grout. Mix only enough material that can be used in two to three minutes. Pour the water into a clean pail and add about 3/4 of compound. Slowly mix the material and after it is thoroughly mixed, add the remainder of the compound and continue mixing. Use the mixture immediately. Do not add more water to the mixture after two minutes. For trowel consistency, use slightly less water.

AS AN ADDITIVE FOR CONCRETE ACCELERATION:
Substitute ASH GROVE PRO® Atlas Grout for 10% to 50% of the cement content and mix thoroughly with the sand and aggregate before adding water. Add enough water to get a workable, placeable mixture. Using lesser amounts of water will increase the strength and speed up the set time. Using larger amounts of water will slow down the set time and decrease the strength. Using warm water will speed up set time and is recommended in cold temperatures. Using cool water will slow down set time in hot weather.

Add ASH GROVE PRO® Atlas Grout to premixed dry mixes to speed up the set time. Any amount of ASH GROVE PRO® Atlas Grout added to any amount of a premix will accelerate the set time. Placement conditions and required set time will determine the addition rate.

7. Placement
Anchoring
Center fixture to be anchored and pour in material. Taper the material up and around the fixture in order to keep water from collecting at base. Allow three to four hours before light service. Allow over 12 hours before moderate to heavy use.

<table>
<thead>
<tr>
<th>Placement temperature</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substrate</td>
<td>50°F</td>
<td>90°F</td>
</tr>
<tr>
<td>Mix</td>
<td>60°F</td>
<td>70°F</td>
</tr>
<tr>
<td>Air</td>
<td>50°F</td>
<td>90°F</td>
</tr>
</tbody>
</table>

8. Curing
Prevent evaporation by fogging exposed substrate after 20 minutes. Cure 24 hours before moderate to heavy use.

Materials modified with ASH GROVE PRO® Acrylic Admix or ASH GROVE PRO® Primer/Admix should be air cured, unless hot and/or drying winds or low humidity are present. Under such conditions, 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
**COMPRESSIVE STRENGTH**:
- 24 Hour 1,000 PSI
- 28 days 6,000 PSI
- 7 Day Tensile 380 PSI
- Shrinkage None
- Set Time 20 Minutes

10. Limitations
- Installations must be protected from freezing temperatures
- Do not add extra water after two minutes
- Do not mix more than can be placed in three minutes
- Do not overmix
- Store in cool, dry place

11. Coverage
125 lbs. of ASH GROVE PRO® Atlas Grout = 1 cubic foot

12. Warning
ASH GROVE PRO® Atlas Grout contains cement and sand. Normal safety wear such as protective clothing, boots, rubber gloves, dust masks, 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
This product meets or exceeds applicable ASTM standards in force at the time of packaging. 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.**

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