GP Grout
High Strength, Non-Shrink, Non-Corrosive Grout

DESCRIPTION
GP Grout is a blend of portland cement, admixtures and proprietary aggregates designed to provide high flexural and compressive strength performance from stiff to fluid consistencies. GP Grout is non-metallic, non-shrink, non-corrosive and contains no chlorides.

USES
GP Grout is ideal for a wide variety of precision applications that include:
- Machinery Grouting: Machinery bases, compressors, punch presses, generators
- Structural Grouting: Steel columns, precast columns, crane rails, beams
- Anchoring: Guard rails, sign posts, dowels, rods, bolts, post tension anchor heads

BENEFITS
- Workability: Meets standards through a wide range of consistencies
- Thixotropic: High flow restored by agitation
- Non-Corrosive: Will not rust
- Cost Effective: Extendable up to 30%
- Strength: Attains high compressive strengths at specified water ratios
- Economical: Good performance and low cost
- Performance: Joins, supports and anchors
- Hardens free of bleeding or segregation
- Consistent: Strict Quality Control testing and standards

STANDARDS
GP Grout has been specifically formulated to exceed the requirements of ASTM C-1107 and Corp of Engineers CRD C-621. When tested in accordance with ASTM C-827, GP Grout yields a controlled, positive expansion.

SURFACE PREPARATION
All surfaces in contact with GP Grout shall be free of dirt, oil, grease, laitance and other contaminants that may act as bondbreakers. All unsound concrete should be removed to ensure a good bond. Smooth, dense surfaces need to be mechanically abraded to provide necessary bonding requirements. Mechanically prepare the substrate to a minimum CSP 5 following ICRI Guideline 310.2R to allow proper bonding. ACI recommends that the area to be grouted should be saturated for 24 hours before placement. Remove any standing water. Substrate should be saturated, surface dry (SSD). Maintain contact areas between 40°F (4°C) and 90°F (32°C) to allow proper bonding. ACI recommends that the area to be grouted be extended by up to 30%, by weight of powder, with clean, washed and dried 3/8" (1 cm) pea gravel. Do not blend excess water as this will cause bleeding and segregation. Do not use any other admixtures or additives.

FINISHING & CURING
Follow standard ACI curing practices. Do not disturb formwork or grout for 24 hours. Use wet rags or burlap to cure for 6 hours after placement. After 6 hours, remove rags from exposed surfaces and cure with a membrane forming curing compound such as US SPEC Maxcure Resin Clear, Hydrasheen 15% or CS-25-1315. For best results, exposed grout should extend downward at a 45° angle from edge of base.

STORAGE
Normal cement storage and handling practices should be observed. Store material in an interior, cool, dry place. Shelf life is one year in original, unopened container.

LIMITATIONS
In addition to limitations already mentioned, please note the following. Do not apply when the surface or ambient temperature is below 40°F (4°C) or when the temperature is expected to fall below 40°F within 48 hours. When grouting at minimum temperatures, ensure surfaces in contact with grout do not fall below 40°F until final set has been achieved and grout has reached 3,000 PSI. Do not apply over surfaces that are frozen or contain frost. Do not apply beyond one year in original, unopened container. Normal cement storage and handling practices should be observed. Store material in an interior, cool, dry place. Shelf life is one year in original, unopened container.

COMPRRESSIVE STRENGTH (ASTM C-109 via C-1107)*

<table>
<thead>
<tr>
<th>SET</th>
<th>1 DAY</th>
<th>3 DAYS</th>
<th>7 DAYS</th>
<th>28 DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A STIFF</td>
<td>3,390 psi (23.35 MPa)</td>
<td>5,000 psi (34.48 MPa)</td>
<td>6,200 psi (42.71 MPa)</td>
<td>10,000 psi (68.95 MPa)</td>
</tr>
<tr>
<td>B PLASTIC</td>
<td>2,900 psi (19.98 MPa)</td>
<td>4,500 psi (31.01 MPa)</td>
<td>5,600 psi (38.38 MPa)</td>
<td>6,700 psi (46.16 MPa)</td>
</tr>
<tr>
<td>C FLOWABLE</td>
<td>2,200 psi (15.16 MPa)</td>
<td>4,400 psi (30.32 MPa)</td>
<td>5,200 psi (35.83 MPa)</td>
<td>6,100 psi (42.03 MPa)</td>
</tr>
<tr>
<td>D FLUID</td>
<td>1,500 psi (10.33 MPa)</td>
<td>4,100 psi (28.25 MPa)</td>
<td>4,700 psi (32.38 MPa)</td>
<td>5,500 psi (37.90 MPa)</td>
</tr>
</tbody>
</table>

MIXING
For larger batches, use a mortar mixer with rotating blades. For smaller batches, use a heavy duty ½" (15mm) (or larger) low-speed, corded drill and mixing paddle #6 per ICRI Technical Guideline 320.5. Pre-wet mixer (or container) and empty excess water. Place ¾ of the required cool, clean potable water in mixer, then add dry material. Mix on low RPM for a total of 3 to 5 minutes, adding the remaining water, until a homogeneous mixture is achieved. When final set has been achieved and grout has reached 3,000 PSI. Do not apply over surfaces that are frozen or contain frost. Do not apply

PACKAGING: 50 lb (22.7 kg) bag, 63 bags per pallet
**GP Grout**

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**PHYSICAL PROPERTIES***

<table>
<thead>
<tr>
<th>Rate of Set (ASTM C-266)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SET</strong></td>
</tr>
<tr>
<td>B FLOWABLE</td>
</tr>
<tr>
<td>C FLOWABLE</td>
</tr>
<tr>
<td>D FLUID</td>
</tr>
</tbody>
</table>

B - 100% - 125% flow table (ASTM C-230, 5 drops in 3 seconds)
C - 125% - 145% flow table (ASTM C-230, 5 drops in 3 seconds)
D - 28 second flow cone method (ASTM C-939)

**Height Change - Moist Cure Hardened Grout (ASTM C-1090)**

<table>
<thead>
<tr>
<th><strong>AGE</strong></th>
<th><strong>% HEIGHT CHANGE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 DAY</td>
<td>(+)0.01</td>
</tr>
<tr>
<td>3 DAYS</td>
<td>(+)0.02</td>
</tr>
<tr>
<td>7 DAYS</td>
<td>(+)0.03</td>
</tr>
<tr>
<td>28 DAYS</td>
<td>(+)0.04</td>
</tr>
</tbody>
</table>

100% of rupture occurred in dummy section

**Flexural Strength (ASTM C-348)**

<table>
<thead>
<tr>
<th><strong>AGE</strong></th>
<th><strong>FLEXURAL STRENGTH</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Day</td>
<td>1,200 psi (8.27 MPa)</td>
</tr>
<tr>
<td>28 Day</td>
<td>1,700 psi (12.05 MPa)</td>
</tr>
</tbody>
</table>

**Chloride Ion Content (ASTM C-1152/ASTM C-1218)**

| **WATER SOLUBLE** | .005 / .014 |
| **ACID SOLUBLE**  | .003 / .008  |

**Density (ASTM C-138)**

| .137 lb/ft² (2.195 kg/m³) |

**Scaling Resistance (ASTM C-672)**

<table>
<thead>
<tr>
<th><strong>AGE</strong></th>
<th><strong>SCALED MATERIAL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>after 25 F/T cycles</td>
<td>.04 kg/m² (.008 lb/ft²)</td>
</tr>
</tbody>
</table>

**Splitting Tensile (ASTM C-496)**

<table>
<thead>
<tr>
<th><strong>AGE</strong></th>
<th><strong>SPLITTING TENSILE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>28 DAY</td>
<td>600 psi (4.13 MPa)</td>
</tr>
</tbody>
</table>

**Modulus of Elasticity (ASTM C-469)**

**MoE**

| 3.04 x 10⁶ (20.95 GPa) @ 28 days |

**Corrosion Resistivity**

GP Grout tested compatible with Vector Corrosion Technologies Galvashield embedded galvanic anodes.

**Effective Bearing Area (ASTM C-1339)**

**EBA**

| 95% |

**LIMITATIONS (continued)**

Over any active faults or cracks in the substrate without addressing any movement that may occur. Do not use as a patching or overlay mortar or in unconfined areas. Setting time will speed up in hot weather and slow in cold weather. For hot and cold weather applications, contact your US SPEC manufacturer’s representative.

**REGULATORY**

Read and follow application information, precautions and Material Safety Data Information.

**RIGHT-TO-KNOW**

This product contains Portland Cement (CAS#65997-15-1) and Crystalline Silica (CAS# 14808-60-7)

**HMIS**

Health 1, Fire 0, Reactivity 0

Prop 65

Warning! This product contains Crystalline Silica, a chemical known to the State of California to cause cancer or reproductive toxicity.

**VOC Content**

0 g/L

**CAUTION**

**EYE AND SKIN IRRITANT**

Contains Portland Cement (CAS# 65997-15-1) and Crystalline Silica (CAS# 14808-60-7). Do not allow contact with eyes or skin. Avoid breathing dust - silica may cause serious lung problems. There is limited evidence silica is a carcinogen. The use of gloves, goggles, dust masks and other protective clothing is recommended. If cement or sand particles get into eyes, rinse immediately with clean water and seek prompt medical attention.

**TECHNICAL SERVICE**

Contact your US SPEC manufacturer’s representative for the most current product information.

**US MIX Co.**

112 South Santa Fe Drive
Denver, CO 80223

Tel: 303.778.7227     Fax: 303.722.8426

Web Site: www.uspec.com

NOTICE OF LIMITED WARRANTY US MIX Co. (manufacturer) warrants to buyer that this product at the time and place of shipment is of good quality and conforms to the manufacturer’s specifications in force on the date of manufacture when used in accordance with the instructions herein. Manufacturer cannot warrant or guarantee any particular method of use, application or performance of the product under any particular condition. This limited warranty cannot be extended or amended by manufacturer’s duties with respect to the product and limited warranty shall be presumed to have been satisfied. Manufacturer in no event is liable for consequential damages. Manufacturer’s duties with respect to the product and limited warranty shall be presumed to have been satisfied. Manufacturer in no event is liable for consequential damages.

**LIMITATION OF WARRANTIES AND LIABILITY**

Buyer assumes all risks associated with the use of this product. Manufacturer expressly disclaims all warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose and all other warranties otherwise arising by operation of the law, course of dealing, custom, trade or otherwise. Buyer’s exclusive remedy if this product is proven to be defective is limited to refund of purchase price by the manufacturer. Refund shall only be available if the buyer notifies manufacturer in writing within thirty days following discovery of any defect. Written notice shall be forwarded to US MIX Co. at 112 South Santa Fe Drive, Denver, Colorado 80223. No claim can be made twelve months after purchase of the product. Twelve months after the purchase manufacturer’s duties with respect to the product and limited warranty shall be presumed to have been satisfied. Manufacturer in no event is liable for consequential damages.

**Yield:** 50 lbs (22.7 kg) will fill approximately 0.43 ft³ (0.012 m³) when 4.5 qts mixing water is used.