AV-100 CHEMICAL GROUT

GRANULES / LIQUID CHEMICALLY REACTIVE GEL

DESCRIPTION
AV-100 is an ultra-low viscosity chemically reactive gel available as either granules or liquid. Having the same viscosity as water, AV-100 can permeate anywhere water can travel and cures within a controllable time frame anywhere from 5 seconds to 10 hours. Once it cures, it creates an effective, long-lasting water barrier while providing superb soil stabilization.

APPLICATION
- Stops water infiltration into manholes, sanitary and storm sewer mainlines, joints, laterals, tunnels, mines, and various other geotechnical applications and underground structures by stabilizing external substrate
- Ground modification/slope stability for prevention of landslides, erosion, or any place where site conditions or project requirements dictate modification of the existing soil properties

FEATURES AND BENEFITS
- Thinnest product on the market
- Can be injected through remote packer equipment
- Controllable reaction times from seconds to hours
- Will not undergo syneresis
- Half-life of 362 years as determined by U.S. Dept. of Energy
- No suspended solids
- Higher strength compared to acrylates
- Greater longevity compared to silicates
- Available in granular or liquid form

GROUTING TECHNIQUES
- Tube-a-Manchette (TAM) Grouting
- Probe Grouting
- Curtain Grouting
- Remote Packer

HOW IT WORKS
AV-100 is injected using a stainless steel, dual-component pump from two containers (see mix procedure). Injecting a 1:1 ratio into the soil or external substrate will produce a strong, impermeable gel obtained via a copolymerization reaction. Additives are available to modify the reactions and cured gel characteristics.

OPTIONAL ADDITIVES
- AC-50W Root Inhibitor – inhibits future root growth (add to grout tank)
- AV-257 loose – increases strength and adhesive qualities (add to grout tank)
- KFe (Potassium Ferricyanide) – extends gel time (add to grout tank)
- AV-105 Gel Guard – reduces freezing point (add equal amounts to both tanks)
- Dyes – used extensively for tracking grout flow

PACKAGING
Product packaged by weight based on specific gravity.
- Bag (Granules) = Net Wt. 50 lbs.
- Tote (Liquid) = Net Wt. 2,300 lbs. / Volume 258 – 265 gal.
- Drum (Liquid) = Net Wt. 130 lbs. / Volume 14.6 – 15 gal.

SHIPPING
- Motor class 77.5
- Hazard class 6.1
- Motor freight available
- Air freight available

CLEANING PRODUCTS
Use water with light detergent.

PROPERTIES*

<table>
<thead>
<tr>
<th>Uncured (solid)</th>
<th>Appearance: Green granules</th>
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<tbody>
<tr>
<td>Specific Gravity: 1.15 @ 72°F (22°C) ±3%</td>
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<tr>
<td>Bulk Density: 1938 lbs/yr³ ± 3% (1150 kg/m³ ± 3%)</td>
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<td>Toxicological: See SDS</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Uncured (liquid)</th>
<th>Appearance: Clear water-white liquid</th>
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<tbody>
<tr>
<td>Viscosity: 1 – 2 cP @ 72°F (22°C) in solution</td>
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<tr>
<td>Specific Gravity: 1.04 @ 72°F (22°C) ± 3%</td>
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<tr>
<td>Weight: 8.66 lbs/gal ± 3% (1.038 kg/L ± 3%)</td>
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<tr>
<td>Toxicological: See SDS</td>
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<table>
<thead>
<tr>
<th>Cured</th>
<th>Appearance: Clear gel mass/translucent</th>
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<tbody>
<tr>
<td>Hydraulic: &lt; 10⁻⁸ m/s</td>
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<tr>
<td>Conductivity: 120 psi (2585 kPa)</td>
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<td>Toxicity: Non-toxic</td>
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LABORATORY RESULTS

MIX PROCEDURE (See Mixing Instructions)
Tank A: Add 10 gallons (37.8 L) of water, add one bag (granules) or one liquid drum of AV-100 to solution, add 0.5 gallons (1.9 L) of AV-101 and fill with water up to 30 gallons. Tank B: Add 10 gallons (37.8 L) of water, add 5 lbs. (2.27 kg) of AV-102, and then bring to 30 gallons with water. Makes a 60 gallon (227 L) batch. Note: Ingredients are only compatible with stainless steel or plastic.

PERFORMANCE
Performance will be influenced by site conditions. If site temperatures are low, heat the product to recommended operating temperatures of 60°F – 75°F (16°C – 24°C). Decreasing pH may extend cure time. High minerals/metals content may adversely affect gel time. Refer to AV-100 Technical Manual for complete product information.

STORAGE
Store in temperatures within or near 60°F – 95°F (16°C – 35°C) in a dry atmosphere.

SAFETY
Use of AV-100 is authorized by Avanti International only after completion of the required Safe Operating Practices Program (SOPP). Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The SDS, mixing instructions, and Technical Manual are available by request or via download at www.AvantiGrout.com.

NOTICE
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