



TECHNICAL DATA SHEET

AV-100[®] CHEMICAL GROUT

GRANULES / LIQUID CHEMICALLY REACTIVE GEL

DESCRIPTION

AV-100 Chemical Grout 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 for 20% grout concentration, 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** Icoset™ – increases strength (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

	Net Wt.	Volume
Bag (Granules)	30 lbs. (13.6 kg)	—
	50lbs. (22.6 kg)	
Tote (Liquid)	2300 lbs. (1,043 kg)	258 – 265 gal. (976 – 1,003 L)
Drum (Liquid)	130 lbs. (58.9 kg)	14.6 – 15 gal. (55.2 – 56.7 L)

SHIPPING

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

PROPERTIES*

UNCURED (solid)

Appearance: White granules
 Specific Gravity: 1.122 @ 68°F (20°C) ±3%
 Bulk Density: 71.79 lbs./ft³ ± 3% (1150 kg/m³ ± 3%)
 Toxicological: See SDS

UNCURED (liquid)

Appearance: Clear water-white liquid
 Viscosity: 1 – 2 cP @ 72°F (22°C) in solution
 Specific Gravity: 1.03 @ 77°F (25°C) ± 3%
 Density: 8.66 lbs./gal ± 3% (1.038 kg/L ± 3%)
 Toxicological: See SDS

CURED

Appearance: Clear gel mass/translucent
 Hydraulic Conductivity: < 10⁻⁸ m/s
 Toxicity: Non-toxic

*Laboratory Results

MIX PROCEDURE (See Mixing Instructions)

Tank A: Add 10 gallons (37.8 L) of water, add one 50 lb. bag (granules) or one liquid drum of **AV-100** to solution, add 0.5 gallons (1.9 L) of **AV-101[®]** Catalyst T+ 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[®]** Catalyst AP, 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 – 100°F (16°C – 38°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 45°F – 95°F (7°C – 35°C) in a dry atmosphere. Keep out of direct sunlight.

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 avantigrout.com.

NOTICE

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