AVANTI
Stop leaks. Stabilize soil.
Control groundwater. Permanently.

TECHNICAL DATA SHEET

AV-150 Acrylate Gel™

Chemically Reactive Gel

AV-150 Acrylate Gel™ is tested and certified by WQA against NSF/ANSI/CAN 61 Drinking Water System Components

For product use restrictions visit www.wqa.org

Description

AV-150 Acrylate Gel™, a high-performance acrylate grout, is designed to prevent water infiltration in manholes, mainlines, laterals, tunnels, mines, and other underground structures. It forms a durable and long-lasting dense water barrier on the exterior of these structures. This very-low viscosity, chemically reactive gel can successfully penetrate soils and rock, and cures in controllable set times from seconds to several minutes. Once cured, AV-150 not only creates an effective water barrier but also offers excellent soil stabilization. Because of its high solids content, AV-150 is suitable to be used for joint and crack injection in concrete structures with hairline fractures. Only Avanti's AV-101® Catalyst T+ and AV-102® Catalyst AP or AV-103® Catalyst SP can be used to maintain certification against NSF/ANSI/CAN 61 Drinking Water System Components.

Applications

- Stops water infiltration into manholes, sanitary and storm sewer mainlines, elevator pits, joints, laterals, tunnels, mines, and various other geo-technical applications and underground structures by stabilizing external substrate.
- Hairline joint/crack injection for water control

Features & Benefits

- High solid content grout
- Very-low viscosity chemistry mixed grout, 3-8 cP (water=1 cP)
- Controllable reaction times from seconds to minutes
- Will not undergo syneresis
- Greater longevity compared to silicates
- Available as tested and certified by WQA against NSF/ANSI/CAN 61 Drinking Water System Component
- Multiple grouting techniques including Tube-A-Manchette (TAM), probe, curtain and remote packer equipment

Required Products

- AV-101® Catalyst T+ (Triethanolamine)
- AV-102® Catalyst AP (Ammonium Persulfate) **or** AV-103® Catalyst SP (Sodium Persulfate)

How AV-150 Works

AV-150 and its catalysts are injected using a stainless steel, dual-component pump from two tanks (see Mix Guidelines). When the contents of both tanks are combined, free radicals are generated that initiate the Free Radical Polymerization process of the AV-150 monomer grout to form a polyacrylate copolymer. Injecting a 1:1 ratio into the soil or external substrate will produce a strong, impermeable solid. Various additives can be used to adjust the reaction process and the properties of the cured gel. For optimal performance, AV-150 should be applied at a solids concentration of 50% or higher for achieving greater gel strength.

Optional Additives

- AV-105 Gel Guard™ – reduces freezing point
- KFe (Potassium Ferricyanide) – extends gel time
  IMPORTANT: It is recommended to add KFe to Tank B (Catalyst Tank). KFe can precipitate out of solution in less than one hour if added to Tank A (Grout Tank).
- Tracer Dyes – used for tracking grout flow

Packaging – product is packaged by net weight

- Pail – 44 lbs. (20 kg)
- Drum – 484 lbs. (220 kg)
- Tote – 2,420 lbs. (1,098 kg)

Rev. 03.2025

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Physical Properties*

UNCURED	
Appearance	Clear Liquid
Viscosity (water=1)	15 – 25 cP @ 72°F (22°C) liquid resin
pH	6.5-7.5
Flash Point	223°F (106°C) CC
Specific Gravity	1.07 @ 72°F (22°C) ± 3%
Density	8.93 lb./gal ± 3% (1.073 kg/L ± 3%)
CURED	
Appearance	White tinted solid mass
Toxicity	Non-toxic
Elongation	70%
Swelling	25%

** Laboratory results*

Mix Procedure Example for AV-150 Acrylate Grout (10-gal. mix at 50% Concentration with 2% catalyst)
Percentage of catalysts is calculated on total batch mix (Tank A + Tank B).
See detailed Mixing Guidelines for various acrylic monomer grout concentrations and tank sizes at avantigrout.com.

Grout Tank (Tank A)

1. Add one pail of AV-150.
2. Add 0.2 gallons (0.8 L) of AV-101® Catalyst T+.
3. Mix thoroughly.

Catalyst Tank (Tank B)

1. Add 3 gallons (11.4 L) of water.
2. Add 1.75 lb. (0.8 kg) of AV-102® Catalyst AP or AV-103® Catalyst SP.
3. Fill with water up to the 5-gallon mark.
4. Mix thoroughly.

IMPORTANT: At elevated temperatures, AV-102 or AV-103 dissolved in water loses its effectiveness rapidly.

Note: Ingredients for both tanks are only compatible with stainless steel or plastic.

Performance
Performance can be affected by site conditions. The temperature of the material will affect the reaction time. If site temperatures are low, warm up the product to the recommended operating range of 60°F to 100°F (16°C to 38°C). A decrease in pH may lengthen the cure time. High levels of minerals or metals may negatively impact gel time. AV-100 grout may expand or swell after curing when exposed to water. The extent of expansion will depend on the grout concentration and/or the confining pressures.

Cleaning
If cross contamination has occurred, remove all cured gel, dissolve baking soda in water, and rinse grouting equipment thoroughly followed by multiple clean water rinses. Dispose of water in accordance with local, regional, national and international regulations.

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
Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The Safety Data Sheets and Mixing Guidelines are available 24/7 at avantigrout.com. Refer to Avanti's Safe Operating Practices Program (SOPP) for further safety, handling, and product use.

Shipping – Motor and Air Freight available

- Not regulated under US DOT Regulations
- Air freight available

Notice
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