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

TECHNICAL DATA SHEET

AV-170 FlexGel™

Chemically Reactive Gel

AV-170 FlexGel™ 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-170 FlexGel™ is a non-toxic, ultra-low viscosity monomer that is chemically activated. The ultra-low viscosity allows it to penetrate hairline cracks, pores, and honeycombed concrete. It cures within a controllable range of 15 seconds to approximately 8 minutes, resulting in a durable, adhesive, and flexible acrylic gel.

Applications

- Stops water infiltration into underground structures by stabilizing external soils (curtain grouting), sealing hairline cracks and honeycombed concrete.
- Injectable water stops
- Reinjection of failed polyurethane grout
- Contract grouting where large voids injected with free-foaming, highly expansive polyurethanes leave minimal leaks or areas where a flexible polyurethane could not travel through cracks
- Injection where non-flexible polyurethanes were used in dynamic cracks or joints.
- Sealing moving joints

Features & Benefits

- NSF/ANSI/CAN 61 Drinking Water Systems Component Certified
- Ultra-low mixed viscosity chemistry, 2-4 cP (water=1)
- Controllable reaction times from seconds to minutes
- Will not undergo syneresis
- Greater longevity compared to silicates

Required Products

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

How AV-170 Works

AV-170 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-170 monomer grouts to form a poly-acrylate copolymer. Injecting at a 1:1 ratio into the soil or substrate will produce a strong, impermeable gel. Various additives can be used to adjust the reaction process and the properties of the cured gel. For optimal performance, AV-170 should only be applied at a 1:1 ratio for a solids concentration of 20%.

Optional Additives

- AV-105 Gel Guard™ – reduces freezing point
- AV-257 Icoset™ – increases adhesive qualities
- Tracer Dyes - used for tracking grout flow

Packaging – product is packaged by net weight

- Pail – 46 lbs. (20.8 kg)
- Drum – 506 lbs. (230 kg)
- Tote – 2,530 lbs. (1,148 kg)

Physical Properties*

UNCURED	
Appearance	Clear Liquid
Viscosity (water=1)	2-4 cP @ 72°F (22°C) as 20% solution
pH	5.5 – 6.0
Specific Gravity (water=1)	~1.175-1.185 @ 72°F (22°C) ± 3%
Density	~ 9.76 lbs./gal. ± 3% (1.17 kg/L ± 3%)

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Water Solubility	Completely miscible
CURED	
Appearance	Elastic white tinted solid mass
Toxicity	Non-toxic
Elongation	300+%
14-Day Water Absorption	50%

** Laboratory results*

Mix Procedure Example for AV-170 Chemical Grout (10-gal. mix at 20% Concentration with 1% catalysts)
Percentage of catalysts is calculated on total batch mix (Tank A + Tank B).
See detailed Mixing Guidelines at avantigrout.com

Grout Tank (Tank A)

1. Add one pail of AV-170.
2. Add 13 fl. oz. (0.37 L) of AV-101® Catalyst T+.
3. Mix thoroughly. AV-170 should be mixed well prior to use to avoid settlement.

Catalyst Tank (Tank B)

1. Add 4 gallons (15.1 L) of water.
2. Add 0.9 lbs. (0.4 kg) of AV-103® Catalyst SP or AV-102® Catalyst AP.
3. Fill with water up to 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 may be affected by site conditions. Injection should occur the day the grout tank is mixed. AV-101 in the grout tank may be consumed over time which will affect the gel time. Mixing the grout tank with AV-101 days in advance might produce a much longer gel time than initially set and might require additional AV-101. Always perform a cup test before injecting.
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. AV-170 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). Keep out of sunlight.

Safety
Use of AV-170 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 Safety Data Sheets and Mixing Guidelines are available 24/7 at avantigrout.com.

Shipping – Motor and Air Freight available

- Not regulated under US DOT Regulations

Notice
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