



TECHNICAL DATA SHEET

AV-160 SUPERGEL™

CHEMICALLY ACTIVATED GEL

DESCRIPTION

AV-160 SuperGel is a **non-toxic**, ultra-low viscosity, chemically activated gel. **AV-160** has the same viscosity as water which allows it to permeate anywhere water can travel and cures within a controllable time frame 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 geo-technical 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

- Ultra-low viscosity
- Can be injected through remote packer equipment
- Controllable reaction times from seconds to hours
- Will not undergo syneresis
- No suspended solids
- Greater longevity compared to silicates

GROUTING TECHNIQUES

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

HOW IT WORKS

AV-160 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 and adhesive qualities (add only to catalyst tank)
- **KFe** (Potassium Ferricyanide) – extends gel time (add to grout tank). CAUTION: KFe and AV-101 added to the grout tank might prematurely gel the grout tank when kept overnight.
- **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.

	Net Wt.	Volume
Tote	2,250 lbs. (1,020 kg)	208-235 gal. (787-890 L)
Drum	135 lbs. (61 kg)	12-13.5 gal. (45.4-51.1 L)

SHIPPING

- Motor Class 70
- Non-hazardous
- Motor freight available
- Air freight available

PROPERTIES*

UNCURED

Appearance:	Orange liquid
Viscosity:	1 – 2 cP @ 72°F (22°C) in 10% solution
pH:	6.5-7.5
Specific Gravity:	~1.15-1.30 @ 72°F (22°C) ± 3%
Density:	~ 10.15 lbs/gal ± 3% (1.22 kg/L ± 3%)
Water Solubility:	Completely miscible

CURED

Appearance:	Orange-tinted gel mass
Hydraulic Conductivity:	< 10 ⁻⁸ cm/s
Compressive Strength:	120 psi in sand
Toxicity:	Non-toxic

*Laboratory Results

MIX PROCEDURE

AV-160 material should be mixed well prior to use to deal with possible settlement.

Tank A: Add 10 gallons (37.8 L) of water and one liquid drum of **AV-160**. Add 0.5 gallons (1.9 L) of **AV-101**® Catalyst T+ to solution 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 or **AV-103**® Catalyst SP, 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.

CLEANING PRODUCTS

Use water with light detergent.

STORAGE

Store in temperatures within or near 45°F – 95°F (7°C – 35°C). Keep out of sunlight.

SAFETY

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

The data, information and statements contained herein are believed to be reliable, but are not construed as a warranty or representation for which Avanti International assumes any legal responsibility. Since field conditions vary widely, users must undertake sufficient verification and testing to determine the suitability of any product or process mentioned in this or any other written material from Avanti for their own particular use. **NO WARRANTY OF SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE.** In no case shall Avanti International be liable for consequential, special, or indirect damages resulting from the use or handling of this product.