AVANTI


TECHNICAL DATA SHEET

AV-550 SOIL STRENGTHENER™
HYDROPHOBIC POLYURETHANE

DESCRIPTION
AV-550 Soil Strengthener is designed to permeate and stabilize various types of soil. This hydrophobic polyurethane increases the load bearing capacity of permeable soil by greatly increasing the cohesion between soil particles and by filling void areas in the soil. The uncured resin is a dark brown liquid which reacts when it comes in contact with water. AV-550 is typically used with AV-551 Soil Strengthener Cat™ to control the cure time. When the reaction occurs, a slight expansion of the resin is noticeable and the material quickly cures to an open cell foam which is impervious to corrosive environments and microorganisms.

APPLICATION
- Stabilizing soil under concrete slabs, roadways, and other structures

FEATURES AND BENEFITS
- Solvent-free system
- Controllable reaction time with AV-551 Soil Strengthener Cat
- Withstands wet/dry cycles
- Extremely low viscosity

GROUTING TECHNIQUES
- Probe Grouting
- Tube-a-Manchette Grouting

HOW IT WORKS
AV-550 is a moisture-activated resin which cures to a very dense material. When injected into the soil, it comes into contact with water. The amount of catalyst and temperature of the water determines how quickly the resin cures.

PACKAGING
Product packaged by weight based on specific gravity.
- Drum: Net Wt. 484 lbs. (220 kg)
- Pail: Net Wt. 44 lbs. (20 kg)
- Gallon: Net Wt. 8 lbs. (3.6 kg)

CATALYSTS
- AV-551 – catalyst, 32 oz. (0.95 L) container
- AV-551 – catalyst, 5 gal. (19 L) pails – approximately 37.5 lb. (17 kg)

SHIPPING
- Motor Class 55
- Non-Hazardous
- Air freight available

CLEANING PRODUCTS
- AV-208 Technical Grade Acetone™ (CAS# 67-64-1) – removes moisture from equipment
- AV-284 Pump Wash™ (Proprietary Blend) – removes uncured resin from pump and hose
- AV-222 Cleaner™ (Proprietary Blend) – removes cured resin from equipment

STORAGE
Store between 45°F – 95°F (7°C – 35°C) in a dry atmosphere. Avoid water and humidity. Keep spouts closed. Packaged under dry nitrogen to keep moisture out and extend shelf life.

SAFETY
Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The SDS is available by request or via download at avantigrout.com.

PROPERTIES*  
AV-550 UNCURED

Appearance: Amber liquid
Corrosiveness: Non-Corrosive
Viscosity: 25 cp @ 68°F (20°C)
Flash Point: C.O.C. 288°F (142°C)
Solids: 90 – 98%
Specific Gravity: 1.122 @ 72°F (22°C) ± 3%
Density: 9.36 lbs./gal ± 3% 1,122 kg/m³ ±3%

AV-550 CURED

Tensile Strength: 1,172 kPa (170 psi)
Compressive Strength: 11,362 kPa (1648 psi in sand)
Bending Strength: 2,544 kPa (369 psi)
Bond Strength (bonding): 193 kPa (28 psi)
Bond Strength (shear): 2,247 kPa (326 psi)
Density: 1,074 kg/m³ (8.96 lbs./gal)
Coefficient of Permeability: 4.98x10⁻³
Shrinkage: 0%
Toxicity: Non-toxic

AV-551 Soil Strengthener Cat

Appearance: Yellowish liquid
Viscosity: 25 cp @ 68°F (20°C)
Flash Point: >255°F (>124°C)

*Laboratory Results

MIX PROCEDURE
AV-551 Soil Strengthener Cat must be agitated by shaking the can prior to adding to resin. Note: Do not allow AV-551 to freeze. Depending on the desired reaction time, add up to 32 oz. of AV-551 to 5 gallons of AV-550. Mix thoroughly, but slowly, to avoid creating bubbles in the solution. Perform the standard cup test with site water to determine the desired reaction time.

PERFORMANCE
Flush equipment with AV-208 before and after use to remove moisture and clean equipment. Performance will be influenced by site conditions. If site temperatures are low, heat the product to recommended operating temperatures of 60°F – 90°F (16°C – 32°C) and/or increase catalyst amount by 1% – 2%. Do not exceed more than 50 oz. of AV-551 per 5-gallon container of AV-550. Do not use open flame as a heat source. Excess amounts of AV-551 may adversely affect performance. Because catalyzed resin will react to moisture from the air, use product soon after mixing for best results.

NOTICE
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