

TECHNICAL DATA SHEET

AV-278 LOW VIS HYDRO™

HYDROPHOBIC POLYURETHANE GROUT

DESCRIPTION

AV-278 Low Vis Hydro™ is a moisture activated MDI-based polyurethane resin whose chemical reaction is catalyzed by mixing AV-279 Low Vis Accel™ with AV-278. Injected as a single component, AV-278 is low viscosity and designed with soil permeation in mind for penetrates with very high expansion to fill voids, stops active or potential water leaks, and stabilizes soils. AV-278 withstands wet/dry cycles, permeates well, and reacts with water to cure dense, closed-cell, impermeable and semi-rigid.

APPLICATION

- 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
- Fills voids on the exterior of below-grade structures
- Stops leaks in below-grade structures

FEATURES AND BENEFITS

- Low viscosity allows for excellent permeation
- Free rise expands 4,000-6,000%
- Solvent-free
- Pumped as a single component
- Controllable reaction time by adjusting AV-279 volume
- Withstands wet/dry cycles

GROUTING TECHNIQUES

- Probe Grouting
- Curtain Grouting
- Pressure Injection

HOW IT WORKS

AV-278 Low Vis Hydro uncured resin must be injected into a confined space. Fill the space at least halfway with unreacted resin. The resin will react with moisture to form a resilient seal accomplished by three mechanisms: the resin seeks out water in the space and adheres to the surface, then begins to expand in the confined space to form a tight, high density compression seal, while the network of compressed grout material within all the cracks/joints forms a mechanical lock.

CATALYST

- AV-279 Low Vis Accel – catalyst, 78 fl. oz. (2.3 L)

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)

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-222 Cleaner™ (Proprietary Blend) – removes cured resin from equipment
- AV-284 Pump Wash™ (Proprietary Blend) – removes uncured resin from pump and hose

STORAGE

Store in temperatures within or near 45°F – 95°F (7°C – 35°C) in a dry atmosphere.

PROPERTIES*

AV-278 – UNCURED	
Appearance:	Brown resin
Viscosity:	25 – 100 cP @ 72°F (22°C)
Flash Point:	244.4°F (118°C)
Specific Gravity:	1.171 @ 72°F (22°C) ± 3%
Density:	9.77 lb./gal. ± 3% 1,171 kg/m ³ ± 3%

AV-278 – CURED	
Appearance:	Milky colored, rigid
Compressive Strength:	TBD
Toxicity:	Non-toxic

AV-279 Low Vis Hydro Accel	
Appearance:	Light yellow liquid
Viscosity:	15-25 cP @ 72°F (22°C)
Flash Point:	>200°F (>93°C)
Specific Gravity:	0.986 @ 72°F (22°C) ± 3%
Density:	8.23 lb./gal. ± 3% 986 kg/m ³ ± 3%

*Laboratory Results

Temperature	Gel (Cure) Times for AV-278 Low Vis Hydro (Min:Sec)		
		Half Catalyst	Full Catalyst
40°F / 4°C		2:00	1:15
50°F / 10°C		1:43	1:05
60°F / 15°C		1:20	0:48
70°F / 21°C		1:05	0:40

MIX PROCEDURE

Depending on the desired reaction time, up to one container of AV-279 Low Vis Accel can be used (see chart above). **Do not use more than one container of AV-279.** Mix thoroughly, but slowly, to avoid creating bubbles in the solution (air bubbles will turn into moisture). 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 use open flame as a heat source. Excess amounts of AV-279 may adversely affect performance. Because catalyzed resin will react to moisture from the air, use product soon after mixing for best results.

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 online download at avantigrout.com.

NOTICE

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