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

TECHNICAL DATA SHEET

AV-315 Microfoam™

Hydrophilic Polyurethane Grout

AV-315 Microfoam™ 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-315 Microfoam™ is a single component, moisture-activated, polyurethane injection resin designed for sealing active water leaks in very fine cracks or tight joints in in concrete and brick structures. AV-315 has an extremely low viscosity and cures flexible, dense, impermeable and closed-cell.

Applications

- Stops active leaks originating from microfine cracks or joints in concrete
- Stops leaks in mines, tunnels, subways, and other dense formations
- For use in below-grade structures: basements, tunnels, utility vaults, etc.

Features & Benefits

- Tested and certified by WQA against NSF/ANSI/CAN 61 Drinking Water System Component
- Low viscosity for excellent penetration
- Free rise expands 300% – 600%
- Non-corrosive
- Cures flexible, dense, impermeable, and closed cell
- Grouting technique: Variable Pressure Application Technique (V-PAT) – Crack Injection

How AV-315 Works

AV-315 reacts with moisture to form a durable, flexible seal accomplished by three mechanisms. First the resin seeks out water in the space and pores of the substrate and adheres to the surface. Second, the resin/water reaction begins to expand forming a tight compressive seal and third the network of compressed grout material within all the cracks establishes a mechanical lock. The preferred ratio is 1:1 (water to resin), however pre-mixing is not required. AV-315 is pumped as a single component.

Optional Products

- AV-203 Multicat™ – cream and gel time accelerator (Note: usage of AV-203 is not tested and certified by WQA against NSF/ANSI/CAN 61 Drinking Water System Component)

Packaging – product is packaged by net weight except when indicated

Grout

- Jug – 8.5 lbs. (3.9 kg)
- Pail – 43 lbs. (19.5 kg)
- Drum – 473 lbs. (214.5 kg)

Optional Catalyst – AV-203

- Container - 78 fl. oz. (2.31 L)

Physical Properties*

UNCURED		
Appearance	Pale yellow resin	
Viscosity (water=1)	50-100 cP @ 72°F (22°C)	ASTM D-4889
Flash Point	>200°F (>93°C)	
Specific Gravity (water=1)	1.031 @ 72°F (22°C) ± 3%	
Density	8.6 lb./gal ± 3% 1,031 kg/m^3 ± 3%	
CURED†		
Appearance	Milky colored, dense, flexible	
Tensile Strength	100 psi	ASTM D-3574
Elongation	250%	ASTM D-3574
Toxicity	Non-toxic	

** Laboratory results*

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Performance - General
Gently shake or stir container(s) before using. For the best results, use AV-315 between 60°F – 90°F (16°C – 32°C). Performance will be influenced by site conditions. If site temperatures are low, use a heat source to warm to ~72°F (22°C) and apply. Do not use open flame as a heat source. At temperatures of 45°F (7°C), the viscosity of the product can significantly increase, making the miscibility with the reaction-water more difficult. The times presented are laboratory results. Actual results may be different in the field due to site water used or site conditions. Perform a standard cup test with site water to determine the desired reaction time.

Performance Using AV-315
See Cream / Gel (Cure) Times Table below for approximate Cream/Gel Times for AV-315.

Cream / Gel (Cure) Times for AV-315 Microfoam (Min:Sec)		
		1:1 Water/AV-315
Temperature	**40°F / 4°C**	1:02 / 5:11
	50°F / 10°C	0:53 / 4:03
	60°F / 15°C	0:37 / 3:02
	70°F / 21°C	0:19 / 2:37
	80°F / 27°C	0:16 / 1:51

**Laboratory results*
1. Resin and water temperatures may affect cream / gel times.
2. Actual results may be different in the field due to site water used or site conditions.

Performance When Adding AV-203 Multicat
AV-203 Multicat may be used at low temperatures and/or high flow water cut-off situations at a maximum of 78 fl. oz. of AV-203 per pail of AV-315. When AV-203 is used to slow down high waterflows, it should not be used as a stand-alone solution but in conjunction with any of Avanti's injection grouts. See Cream / Gel (Cure) Times Table below for approximate cure times for AV-315 used with AV-203.

Cream / Gel (Cure) Times for AV-315 Microfoam + AV-203 Multicat (Min:Sec)			
		1:1 Water/AV-315 + Half Catalyst (Resin:Catalyst, 16:1)	**1:1 Water/AV-315 + Full Catalyst (Resin:Catalyst, 8:1)**
Temperature	**40°F/4°C**	0:35 / 1:24	0:32 / 1:10
	50°F/10°C	0:23 / 1:06	0:20 / 0:55
	60°F/15°C	0:15 / 0:53	0:14 / 0:46

**Laboratory results*
Note: Do not use more than one container of AV-203 catalyst per pail of AV-315. Usage of AV-203 is not tested and certified by WQA against NSF/ANSI/CAN 61 Drinking Water System Component
1. Resin and water temperatures may affect cream / gel times.
2. Actual results may be different in the field due to site water used or site conditions.

Cleaning
Do not use water to clean equipment. AV-315 is water activated and will setup or cure in your hoses and equipment. Flush with AV-284 Pump Wash™ to remove uncured resin in hoses and equipment. Purge equipment and hoses with AV-208 Technical Grade Acetone™ before use to remove any remaining AV-284 and moisture.

- AV-208 Technical Grade Acetone™– removes moisture from equipment
- AV-222 Cleaner™– removes cured resin from equipment
- AV-284 Pump Wash™ – removes uncured resin from pump hose

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Storage
Store in temperatures within or near 45°F – 95°F (7°C – 35°C) in a dry atmosphere. Keep container tightly closed when not in use. Packaged under dry nitrogen to keep moisture out and extend shelf life. Storage of opened/partial containers at the lower range of the recommended storage temperature is not advised as moisture in the air above a partial container might condensate and might cause the grout to premature gel in the container. Avanti does not recommend storing full or partially filled containers of AV-315 that have been catalyzed or mixed with AV-203. Catalyzed grout may react over time or if not stored correctly.

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.

Shipping – Motor and Air Freight available

- Not regulated under US DOT Regulations

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.

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