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

TECHNICAL DATA SHEET

AV-103® Catalyst SP

Sodium Persulfate (SP) | Initiator

Description

AV-103® Catalyst SP - commonly referred to as SP - is a white crystalline granular material utilized as the initiator in the Free Radical Polymerization reaction of acrylic monomer grouts. It is exclusively introduced into Tank B, designated as the initiator side. AV-103 plays a crucial role in the performance and application of the acrylic grouting systems, ensuring reliable and effective results in various sealing and soil stabilizing applications. AV-103® Catalyst SP is used with all of Avanti's free radical activated acrylic monomer grouts:

- AV-100® Chemical Grout
- AV-118® Duriflex
- AV-150 Acrylate Gel™
- AV-160 SuperGel™
- AV-170 FlexGel™

Features & Benefits

- Amount of AV-103 used determines reaction times from seconds to hours
- Exclusive product to be used as tested and certified by WQA against NSF/ANSI/CAN 61 Drinking Water System Components Avanti's acrylic grouts

Required Products

- Avanti's acrylic monomer grouts
- AV-101® Catalyst T+ (Triethanolamine)

How AV-103 Works

AV-103 is added to the initiator solution tank, typically Tank B at concentrations from 0.5 – 10 % on total batch (A+B) depending on the type of acrylic monomer grout batch prepared. The addition of AV-103 in water in Tank B will immediately start the formation of free radicals. When the initiator solution in Tank B is mixed with the grout solution in Tank A, the free radical formation is catalyzed. The free radicals generated will start the Free Radical Polymerization process of the acrylic monomer grouts to form poly-acrylic copolymers.

Do not mix AV-103 with AV-101 in their pure forms. These materials are chemically incompatible and may result in a hazardous reaction.

Packaging – product is packaged by net weight

- Container – 8.8 lb. (4 kg)
- Pail – 50 lb. (22.7 kg)
- Drum – 220 lb. (100 kg)

Physical Properties*

Appearance	White crystals
Odor:	odorless
Dynamic Viscosity @72°F (water=1)	1-2 cP in solution
pH	4 – 6 (1% solution)
Boiling Point	Decomposes > 212°F (100°C)
Melting Point	Decomposes > 212°F (100°C)
Specific Gravity @72°F	2.60
Solubility in water	73% by weight @ 77°F (25°C)

** Laboratory results*

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Mix Procedure Example for AV-100 Chemical Grout (50-gal. mix at 12% Concentration with 1% catalysts)
Percentage of catalysts are calculated on total batch mix (Tank A + Tank B).
See detailed Mixing Guidelines for various acrylic monomer grout concentrations and tank sizes at avantigrout.com.

Grout Tank (Tank A)

1. Add 10 gallons (37.8 L) of water.
2. Add one 50 lb. bag (granules) or one 130 lb. drum (liquid) of AV-100 to tank.
3. Add 0.5 gallon (1.9 L) of AV-101® Catalyst T+.
4. Fill with water up to the 25-gallon mark.
5. Mix thoroughly.

Catalyst Tank (Tank B)

1. Add 10 gallons (37.8 L) of water.
2. Add 5 lb. (2.27 kg) of AV-103® Catalyst SP.
3. Fill with water up to the 25-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.

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) in a dry atmosphere and keep the lid closed. Elevated temperatures and moisture will degrade SP.
Caution: Keep AV-103 away from reducing agents such as AV-101 in their pure forms. Contact can lead to hazardous reactions. Handle and store each product separately, following appropriate safety precautions.

Safety
Always use OSHA-approved personal protective equipment (PPE). Use a type P (particulates) respiratory filter. Inhalation or contact with airborne dust containing sodium persulfate can lead to irritation of the eyes, nose, throat, lungs, and skin. Refer to the SDS for complete safety precautions. The SDS is available by request or via download at avantigrout.com. Refer to Avanti's Safe Operating Practices Program (SOPP) for further safety, handling, and product use.

Shipping – Motor and Air Freight available

- Hazard Class 5.1
- UN 1505
- Keep away from reducing agents such as AV-101 Catalyst T+ during shipping and transport.

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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