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

TECHNICAL DATA SHEET

AV-101® Catalyst T+

Triethanolamine (TEA) | Catalyst

Description

AV-101® Catalyst T+ **-** commonly known as Cat-T or TEA - is a clear liquid designed to catalyze reactions in Avanti's acrylic gel systems. It is exclusively introduced into Tank A, designated as the grout side. AV-101 plays a crucial role in the performance and application of the acrylic grouting systems, ensuring consistent and reliable results in various sealing and soil stabilizing applications. AV-101 Catalyst T+ 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

- Below the 80% threshold concentration and does not require to be enrolled in the Chemical Facility Anti-Terrorism Standard (CFATS) of Cybersecurity & Infrastructure Security Agency (CISA)
- Safer to handle with less than 0.5% of Diethanolamine content
- Amount of AV-101 used determines reaction times from seconds to hours
- Has a much lower freezing point than pure, commercial blends of Triethanolamine
- 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-102® Catalyst AP (Ammonium Persulfate) **or** AV-103® Catalyst SP (Sodium Persulfate)

How AV-101 Works

AV-101 is added to the grout solution tank, typically Tank A at concentrations from 0.5 – 10 % on total batch (A+B) depending on the type of acrylic monomer grout prepared. The addition of AV-101 Cat T+ will boost the pH of the grout solution, thus catalyzing the formation of free radicals when the grout solution tank A is mixed with the activator solution in Tank B (either AV-102 or AV-103 solution). 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-101 with AV-102 or AV-103 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 – 45 lb. (20.4 kg)
- Drum – 496 lb. (225 kg)

Physical Properties*

Appearance	Clear liquid
Dynamic Viscosity @72°F (water=1)	40-90 mPa·s (cP)
pH	10.5-11.5 (14.9% solution)
Boiling Point	212-608°F (100-320°C)
Freezing Point	-35°F (-37°C)
Flash Point	199.9-354°F (93.3-179°C)
Vapor Pressure @72°F	14.6 mm Hg
Specific Gravity @72°F	1.109 – 1.119
Density	9.30 lb./gal ± 3% (1.114 kg/L ± 3%)
Solubility in water	100 % soluble in water

** 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-102® Catalyst AP or 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
Use water with light detergent. 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. Keep out of direct sunlight.
Caution: Keep AV-101 away from oxidizing agents such as AV-102 Catalyst AP or AV-103 Catalyst SP in their pure forms. Contact with oxidizers may result in hazardous reactions. Handle and store each product separately, following appropriate safety precautions.

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. Refer to Avanti's Safe Operating Practices Program (SOPP) for further safety, handling, and product use.

Shipping – Motor and Air Freight available

- Not regulated under US DOT Regulations
- Keep away from oxidizers such as AV-102 Catalyst AP and AV-103 Catalyst SP 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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