

## PRODUCT DESCRIPTION

AzoGrout 443-C is a single component, hydrophobic polyurethane grout used for soil stabilization, underground concrete repair, and waterproofing. The low-viscosity material penetrates fine cracks in rock and concrete and cures to form a semi-rigid foam barrier that repels water. AzoGrout 443-C can also be used to stabilize and add structure to sand, loam, or clay by encapsulating the granules and forming a rock-like mass. Use with Azo-Cat 23 to accelerate reaction time.

Water Quality Associations has tested AzoGrout 443-C in accordance with the National Sanitation Federation (NSF) standard 61 and 372 and has approved this material for contact with potable water.

## PRODUCT APPLICATIONS



### Soil Stabilization

- Shoring excavation
- Building foundations
- River and lake embankments
- Quicksand
- Sand traps



\* For NSF/ANSI/CAN 61 and 372 use restrictions visit: [www.wqa.org](http://www.wqa.org)

## PROPERTY OVERVIEW

Viscosity	
Gel Time	
Tensile Strength	
Elongation	
Flash Point	390°F / 199°C
Color	Light Brown
Shelf Life	1 Year
Sizes Available	<ul style="list-style-type: none"> <li>• 5 gallon</li> <li>• 55 gallon</li> </ul>

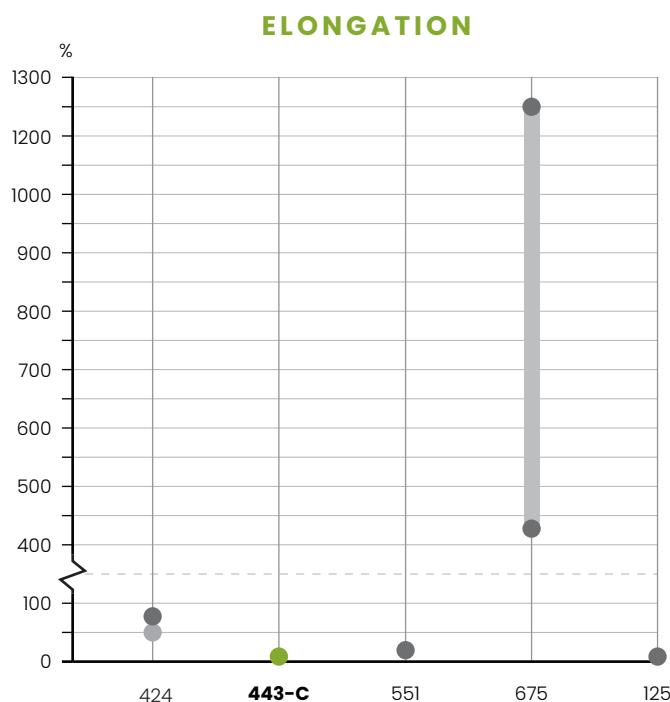
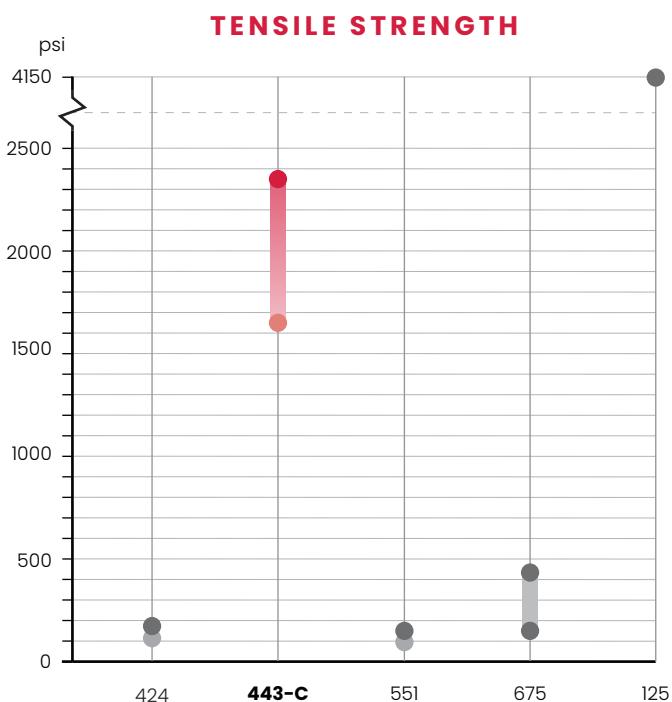
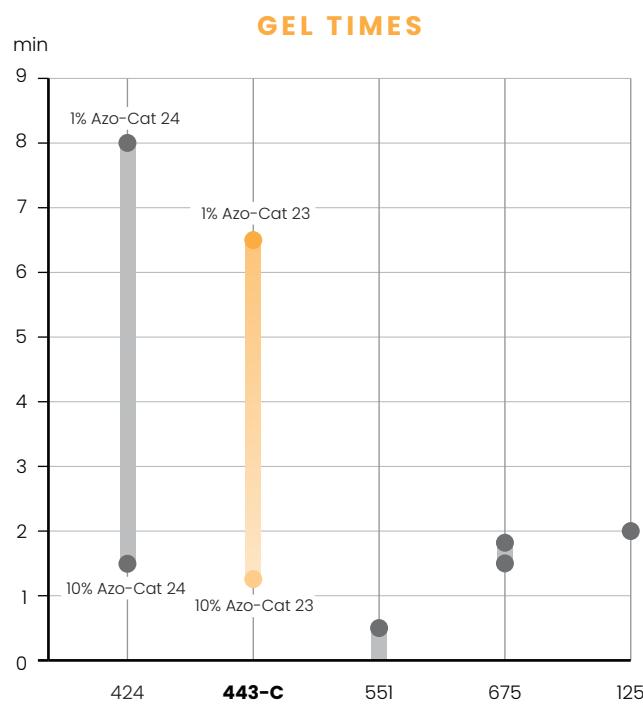
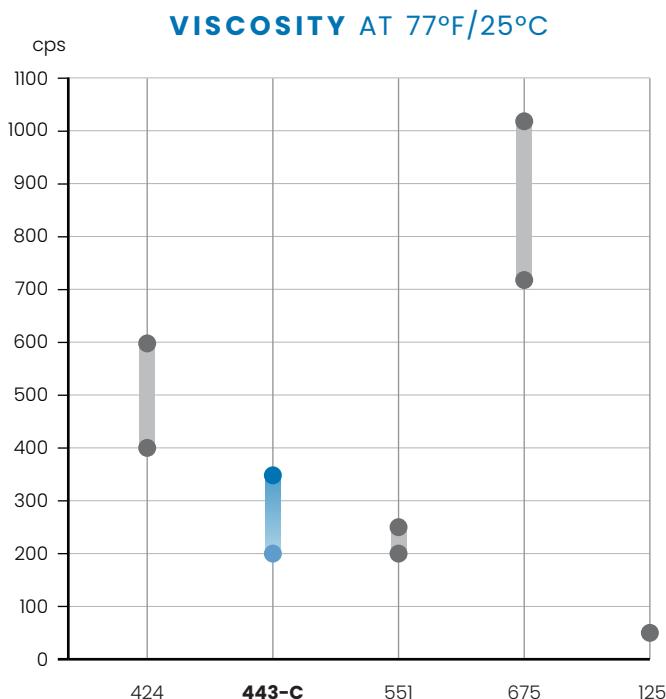
### Underground Waterstop

- Dams
- Tunnels
- Subways
- Mines


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**PROPERTIES OF AZO-GROUT 443-C**


**TABLE 1: PHYSICAL PROPERTIES OF AZOGROUT 443-C (UNCURED)**

Property	Value	Test Method
Color	Light Brown	Visual
Specific Gravity	1.12 – 1.14	ASTM D891
Viscosity at 77 °F (25 °C)	200 – 350 cps	ASTM D2196
Storage Stability	1 Year	
Corrosiveness	Non-Corrosive	
Flash Point	390 °F (199 °C)	

**TABLE 2: PHYSICAL PROPERTIES OF AZOGROUT 443-C (CURED)**

Property	Value	Test Method
Tensile Strength	1650 – 2350 psi	ASTM D638
Elongation	2.5 – 4.5 %	ASTM D638
Shrinkage by Weight	0 %	In-House
Shrinkage by Volume	0 %	In-House
Toxicity	Non-Toxic	
Free-Rise Density	0.9 – 1.3 lbs/ft <sup>3</sup> (g/cc)	
Compression of Soil Stabilized Materials	> 1150	

## HOW TO USE

### HAND-MIX REACTIVITY CHECK

A pre-blend reactivity test can be performed by hand mixing AzoGrout 443-C and Azo-Cat 23 in paper cups. Add Azo-Cat 23 to AzoGrout prior to mixing with water. Use the following ratios for a reactivity check:

#### Recipe:

- 100 Parts by Weight of AzoGrout 443-C
- 10 Parts by Weight of Azo-Cat 23
- 5 Parts by Weight of Water

#### Steps:

1. Add the Azo-Cat 23 to the AzoGrout 443-C and homogenize
2. Add the water and mix thoroughly
3. Start the timer:
  - a. Determine the cream time (the time it takes the mixture to just begin to foam)
  - b. Determine the top of rise time (the time in which the material is no longer rising)

## SITE PREPARATION

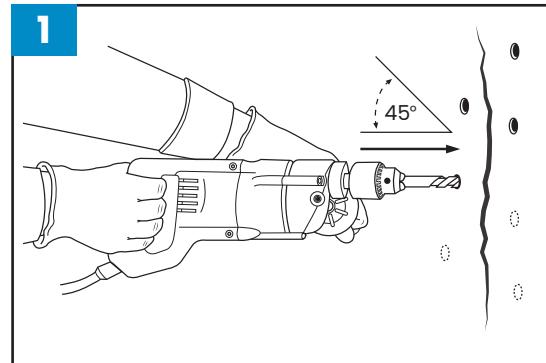
#### Steps:

##### 1. Crack Repair and Waterstop

Using a hammer drill with a masonry bit, prepare the work site by drilling holes at approximately a 45° angle to intersect the application site at about half the depth of the fissure. Holes are typically drilled on opposing sides of the application site in an alternating pattern. The spacing is dependent on the crack size.

##### 2. Soil Stabilization

Each situation requires an evaluation on how to best apply the grout to add structure to the soil. To stabilize any water bearing soil, sand, loam, or clay in various applications where concrete is present, including the outside of tunnels, bridge footings, and shafts, drill injection holes in the concrete in the area of reinforcement.



**TABLE 3: EFFECT OF AZO-CAT 23 ON GEL TIME AT 77 °F (25 °C)**

Azo-Cat 23 Level	Start of Rise	Top of Rise	Product
2 %	0.47 – 0.5 min (28 – 30 s)	6 m (360 s)	Soil Foam
4 %	0.2 – 0.25 min (12 – 15 s)	3 m (180 s)	Soil Foam
8 %	0.15 – 0.25 min (9 – 15 s)	1.5 m (90 s)	Soil Foam
10 %	0.07 – 0.13 min (4 – 8 s)	1.23 m (74 s)	Soil Foam

Table 3 indicates how varying amounts of Azo-Cat 23 affect gel time. Note that the temperature of the components will also affect the reaction time; hotter materials will decrease the reaction or working time and colder materials will increase the reaction time. Furthermore, pH and other factors present within the application site may affect the reaction or work time.

## APPLICATION METHOD

Mix the appropriate percentage of Azo-Cat 23 with AzoGrout 443-3 based on your desired rise time. Temperatures of the repair area at the job site may affect the reaction speed. Start with a quantity of material that can be applied in a reasonable amount of time. Inject the mixture using a single-component injection pump.

Flush the pump, hoses, and all mechanical components with Azo-Purge MP2.

## PRECAUTIONS

This material is intended to be used by trained professionals with the proper equipment. The following safety measures are recommended:

- Wear protective gloves, clothing, goggles, hearing protection for noise reduction, and hard hats for falling debris.
- Do not eat, drink, or smoke while in active contact with these materials.
- Avoid skin contact.
- Wash hands thoroughly with soap and cool water. Never wash the skin with a solvent.
- Anyone experiencing difficulty breathing when working with these materials or showing an allergic reaction should seek fresh air immediately and consult a physician if symptoms persist.

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## MATERIAL STORAGE

Open containers of material should be used quickly to avoid moisture contamination. If a container needs to be resealed, it should be blanketed with nitrogen or dry air (less than -40 °F dew point) to minimize water exposure. All spills of AzoGrout 443-C should be cleaned up by absorbing the grout into an inert material and then transferring the mixture to an open top drum. Drums should not be sealed for 24 hours. Dispose of waste material in accordance with state and local regulations. Refer to the Safety Data Sheets (SDS) for further information.

## PACKAGING

AzoGrout 443-C is available in 5-gallon pails (45 pounds) and 55-gallon drums at (463 pounds).

**WARRANTY:** The information contained in this document is to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. The customer must inspect and test our products before use, and satisfy themselves as to the contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials, and in no event shall we be liable for special, incidental, or consequential damages.