



Introducing Cost-Effective Arsenic Removal You Can Count On

ADSORBSIA™ GTO™
Titanium-Based Arsenic
Removal Media





Arsenic in Drinking Water is a Global Issue

All over the world, governments and citizens alike are becoming concerned about increasing levels of arsenic found in drinking water. In countries such as the United States, China, Germany, Argentina and many more, efforts to remove arsenic from potable drinking water are accelerating.

ADSORBSIA™ GTO™ titanium-based media from The Dow Chemical Company was developed specifically to meet this emerging challenge, providing the most cost-effective option for reducing arsenic levels in drinking water. Read on to learn more about the benefits and advantages of ADSORBSIA GTO adsorbent media.

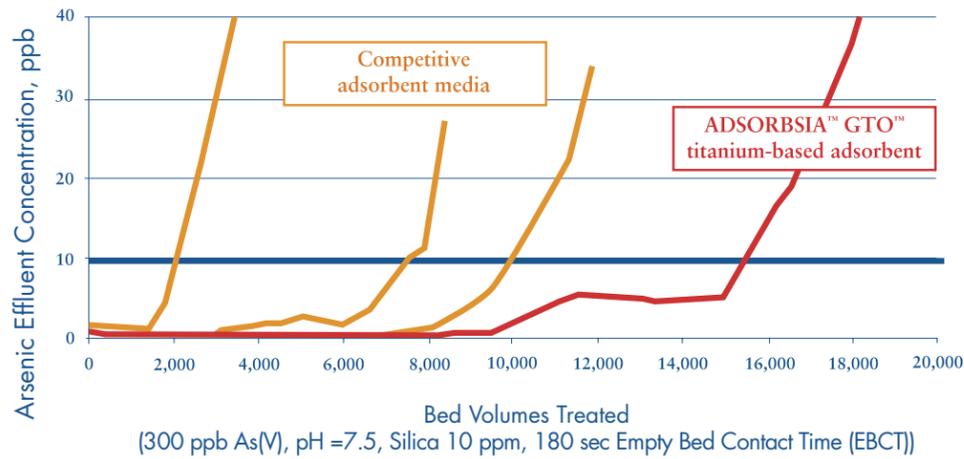
Easy to Use

Based on patented technology, ADSORBSIA™ GTO™ media is a disposable, white, free-flowing granular adsorbent. Dow's proprietary granulation process produces a titanium oxide based product that preserves the kinetic properties of its nanocrystalline structure, in a physically stable media. Studies funded by the United States Department of Energy have demonstrated that ADSORBSIA GTO media has kinetics approximately ten times faster than those of currently available iron-based media. This kinetic advantage allows for flexible system design and faster flow rates. ADSORBSIA GTO media is NSF/ANSI 61 certified without limitations to flow or pre-treatment.

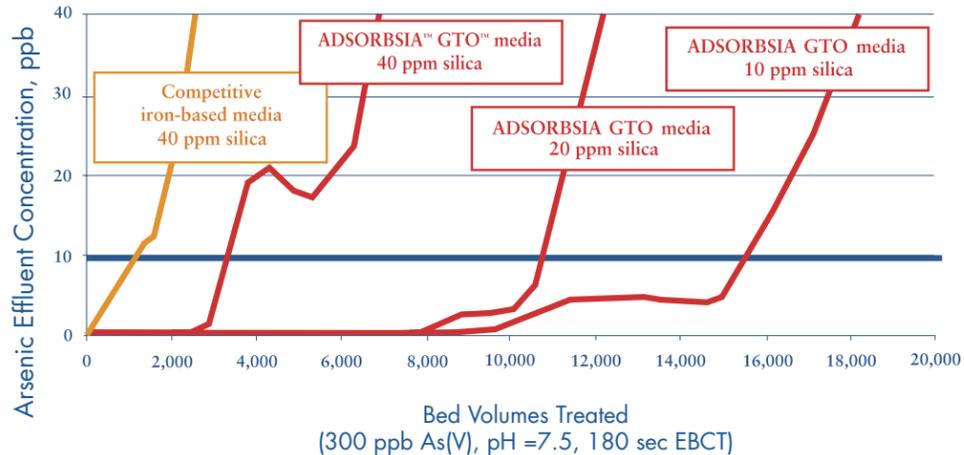
High Capacity Allows Smaller Systems

Many factors affect a media's capacity in operation, including the pH of feed water, amount and ionic form of arsenic present, as well as interfering ions. ADSORBSIA™ GTO™ media has been shown to be the highest capacity media available for a wide variety of water conditions. It is effective in removing both As(III) and As(V) under all typical pH conditions. ADSORBSIA GTO media's capacity for arsenic is independent of sulfate, phosphate and vanadium concentrations, and is the most resistant to the presence of silica. Because ADSORBSIA GTO media has higher capacity than other commercially available media, it can be effectively used in existing system designs.

Highest Effective Capacity of Commercially Available Adsorbent Media



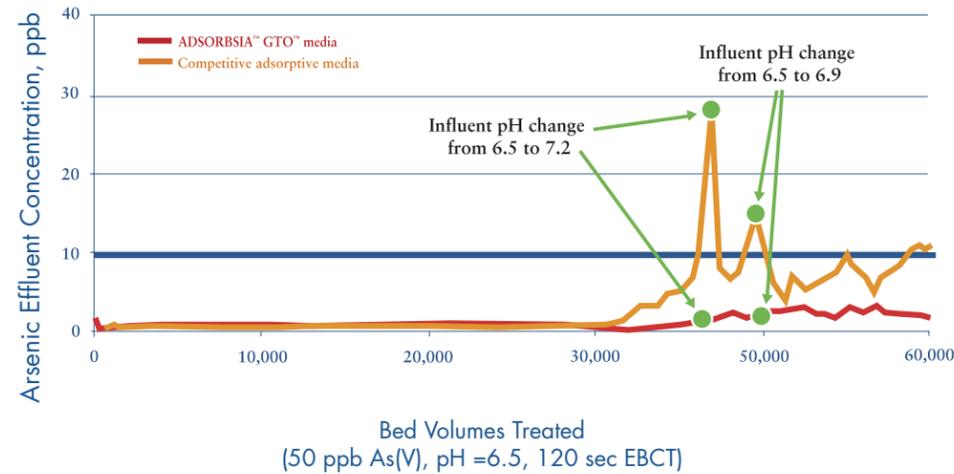
Best Performing Adsorbent Media in High Silica Waters



Consistent Performance

Adsorption medias typically have higher capacity at lower pH. Systems operators can adjust the pH in the feed stream to obtain higher operating capacity. However, loss of pH control has been shown to result in elevated levels of arsenic from many media. ADSORBSIA™ GTO™ media has stable performance and provides consistent removal of arsenic, even with fluctuating pH conditions. This is important when using pH adjustment, but is also beneficial when using a feed source that has natural, seasonal fluctuations in pH.

Stable Performance During pH Fluctuations



Easy Disposal

ADSORBSIA™ GTO™ media is designed with high capacity so regeneration is not required. This eliminates the need to worry about disposal of arsenic-laden waste regenerant streams. ADSORBSIA media offers an affordable, easy-to-operate approach, especially for small or mid-sized systems. Its strong affinity for arsenic also allows the media to maintain a strong hold on the removed arsenic, allowing for easier and safer disposal. Spent media from arsenic loading tests have been shown to pass the TCLP (Toxicity Characteristic Leaching Protocol) as well as the California WET extractives test, indicating that it meets the typical United States criteria for disposal in a landfill as non-hazardous waste.¹

¹Because use conditions and applicable laws may differ from one location to another and may change with time, customers are responsible for determining whether ADSORBSIA GTO media and the information in this document are appropriate for the customer's use and for ensuring that the customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments.

Quality Backed by Precision Processing

Dow is known all over the world for producing the highest quality water purification products – FILMTEC™ membranes and DOWEX™ ion exchange resins. The production process for ADSORBSIA™ GTO™ media applies that same focus on precision and ensures the highest quality product.

ADSORBSIA™ GTO™ Media Typical Physical and Chemical Properties

Property	Unit	Value
Product Type	-	Titanium oxide based granulation
Particle size range		
On 10 mesh	%	<5
Through 60 mesh	%	<10
Moisture Content	%	<15
Equilibrium Capacity* (@ 50ppb, pH 7, room temperature)		
Arsenic (V)	g/kg	12-15
Arsenic (III)	g/kg	3-4

*NSF standard 53 water

Want to know more?

To learn more about ADSORBSIA™ GTO™ titanium-based media, please visit www.adsorbsia.com.



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