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ARSENIC REMOVAL WITH TITANIUM BASED MEDIA

Titanium oxide-based media is a disposable, white, free-flowing granular adsorbent used for arsenic removal. Advanced granulation processes can preserve the kinetic properties of nanocrystalline titanium oxide in a physically stable media. Compared to many conventional iron-based adsorptive media, titanium oxide media can offer faster reaction kinetics, flexible system design, and higher operating flow rates. Many titanium oxide medias are also certified to NSF / ANSI 61 for potable water applications.



- TITANIUM BASED ADSORBTIVE MEDIA
- NON-REGENERATIVE
- DISPOSABLE MEDIA
- NSF / ANSI 61 APPROVED
- PRESSURE OR GRAVITY VESSELS
- KINETICS FASTER THAN IRON BASED MEDIA
- HIGH ADSORBTIVE CAPACITY ALLOWS SMALLER FOOTPRINT SYSTEMS
- PRE-OXIDATION NOT REQUIRED
- LOW MAINTENANCE
- SIMPLE TO OPERATE
- EFFECTIVE IN REMOVING As^3 AND As^5
- WORKS UNDER ALL TYPICAL pH CONDITIONS
- PILOT FILTERS AVAILABLE
- RETROFIT EXISTING SYSTEMS

THE PROCESS AND HOW IT WORKS

Many factors affect a media's capacity in operation, including the pH of feed water, the amount and ionic form of the arsenic present, and the concentration of interfering ions. Titanium oxide-based media can provide strong arsenic removal performance across a wide range of water conditions and is effective in removing both As^3 and As^5 under typical operating pH conditions. Depending on the specific media formulation and water quality, capacity and selectivity may vary in the presence of sulfate, phosphate, vanadium, and silica. Because titanium oxide media can offer high adsorptive capacity, it may be applied in both new installations and retrofit system designs.

Adsorptive medias typically have higher capacity at lower pH, and operators can sometimes adjust feedwater pH to improve operating capacity. However, maintaining stable removal performance depends on consistent process control and the characteristics of the selected media. Titanium oxide-based media can provide reliable arsenic removal across normal pH variations, which can be beneficial when treating source waters with seasonal or operational fluctuations.

Titanium oxide based media is commonly applied as a high-capacity, non-regenerable adsorptive media, eliminating the need for chemical regeneration and the handling of arsenic-laden regenerant waste streams. This can provide an affordable and easy-to-operate approach, especially for small to mid-sized systems. Disposal requirements for spent media depend on site-specific loading, water quality, and applicable regulatory testing, including protocols such as TCLP or other local requirements.



LOCAL REPRESENTATIVE

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