



Filter Media and Particle Retention

The filter media supplied with Tower-Flo® filter systems is consistent with American Water Works Association (AWWA) standards for fine filter sand for potable water; that is, quartzite or silica in nature, hard, not smooth, with a uniformity coefficient of 1.7, a relative size of .45 to .55 mm, and containing no more than 5% flat particles, or more than 1% clay, loam dust, or other foreign material.

Filter media conforming to the AWWA standard is generally accepted as retaining 20 micron size particles and larger when clean. Particulate entering the tortuous pathways created by the deep bed of sand will become trapped in the interstitial spaces between the individual grains of sand (that space is defined by the uniformity coefficient criteria of the standard). As these spaces become increasingly clogged by the retained particulate, progressively finer particles will be trapped over the course of a filter run (from backwash to backwash). At a 10 psi pressure drop across the media bed – the point at which backwash will be initiated by differential pressure – it is generally accepted that the media bed, “loaded” with particulate, will retain approximately 99% of 10 micron particles and 90% of 5 micron particles.

Series TFB systems utilize two additional grades of support media -- 1/8" to 1/4" gravel and 1/4" to 1/2" rock. These additional support grades are necessary for proper hydrodynamics inside the vessel at the significant flow rates found in Series TFB systems.

All three grades of media weigh 100 lbs. per cubic foot.



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