



303 Najoles Rd. Suite 112 Millersville, MD 21108

5D

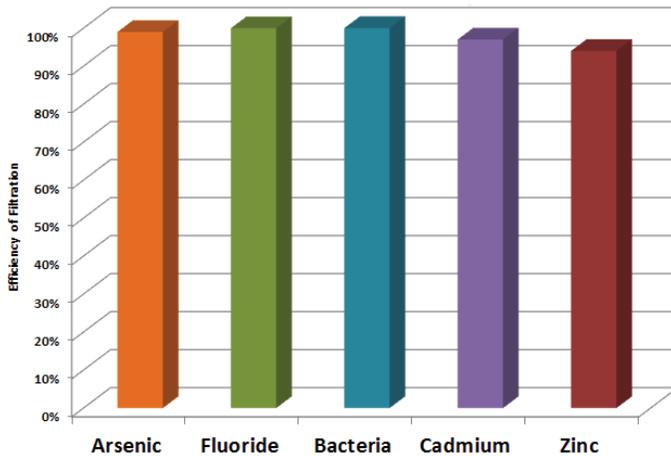
Reticulated Foam

A Foamulations' Exclusive Media



Featured Contaminant Selectivity

-  **Arsenic III & V**
-  **Fluoride**
-  **Heavy Metals**
-  **Bacteria**
-  **Viruses**



Filtration Mechanism Specifics

5D purification media is a very strong adsorbent for many Heavy Metals, Fluoride, Bacteria and Viruses that will not release the chemical bonds formed in the purification process. This media has been tested at high and low concentrations, a full range of PH levels and both high and low flow rates. All tests have shown that 5D is a more efficient filtration media for Both Arsenic III & V and for Fluoride than the available competing technologies. Foamulations' unique reticulated delivery system for the nanoparticle allows this amazing media to perform in small gravity flow situations and in high pressure fast flow situations. 5D is also one of the only known passive biocides. Though the exact mechanism is still being researched it is believed that the 5D disrupts the cell wall instantly killing and adsorbing the biological contaminations from both gas and liquid influent streams.

Efficiencies and Capacities

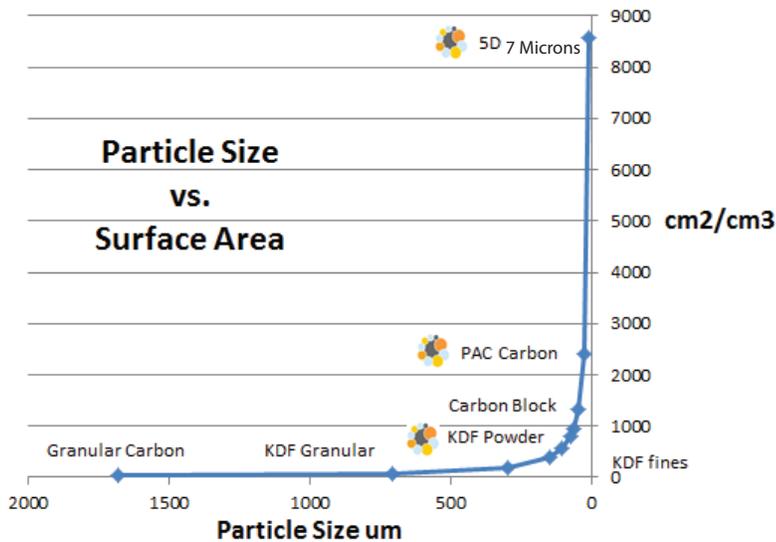
Contaminant	Efficiency Low Concentration	Efficiency High Concentration	Expected Capacity
Arsenic	99.99% @ 56.37 ppb	99.99% @ 322.9ppb	120 Litres/Cu.In. @50ppb
Fluoride	99.99% @ 6.03ppm	97.85% @ 8.32ppm	12 Litres/Cu.In. @ .5ppm
Cadmium	99.83% @ 135ppb	97.62% @ 353ppb	100 Litres/Cu.In. @60ppb
Zinc	98.71% @ 1635ppb	94.38% @ 5910ppb	100 Litres/Cu.In. @60ppb
Bacteria	N/A	6 Log	6 Log

* Bacteria and Virus results may vary depending on the specific Bacteria and Viruses used.

All 5D tests were performed using 100ppi material @ .85grams/Cu.In.

* WQA Certification for ANSI/NSF 61 covers extraction only. The contaminant removal data listed in the above graphs were performed by UL labs and Silver State Labs and are not included in the WQA certification*

Foamulations Increased Efficiency

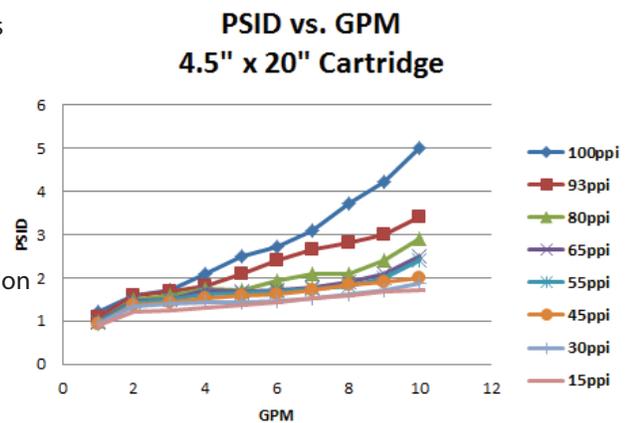


Graph F1

Foamulations' reticulated medias outperform the same medias in granular form because of chemical kinetics and the Collision Theory. This is accomplished by the size of the particle and the reticulated structure which causes a torturous path for the influent gas or liquid solution. The law of mass action states that the speed of a chemical reaction is proportional to the quantity of the reacting substances. In the case of Foamulations' medias it is the quantity of readily available surface area. Graph F1 shows as the particles decrease in size the surface area increases exponentially. In relation to Collision Theory the more collisions created the higher percentage of chemical reactions. The reticulated structure assures the influent stream will see many collisions with the most efficient particle possible.

Foamulations Pressure Differential

One of the main benefits of Foamulations' reticulated medias is the lack of PSID (pressure differential) over standard filtration cartridges. Most 4.5" diameter filtration cartridges max out at approximately 4-5gpm. Foamulations' cartridges have been pushed upwards of 10gpm and still show lower PSID than all other filtration cartridges. Foamulations cartridges also filter axially so the influent sees a much larger bed depth than that of comparable radially flown cartridges. The reticulated structure can also act as a separation or dispersion layer which will help to decrease the overall PSID even when used in conjunction with granular medias. Graphs are available to show how using Foamulations' reticulated media as a dispersion or separation layer can improve the overall PSID. Graph F2 shows the PSID in a standard 4.5" x 20" cartridge for the various PPI (pore per inch) or density of reticulated medias available. The 5D media is typically manufactured at 100ppi.



Graph F2

Foamulations can shape, size and cut medias to fit directly in your current housing or we can aid in the development of a housing which will help our media function in the most efficient manor. Foamulations' reticulated media can be used in gravity situations, high and low pressure situations. Contact a Foamulations engineer today to help with your next filtration project.



5D Reticulated Foam is WQA tested and certified to NSF/ANSI 61 for materials safety only. See www.wqa.org for conditioning and use restrictions.

1-800-345-7873

410-729-8988

www.foamulations.biz