FILTER FOAM TECHNOLOGIES

303 Najoles Rd. Suite 112 Millersville, MD 21108

FOAMULATIONS

Activated Carbon Reticulated Foam

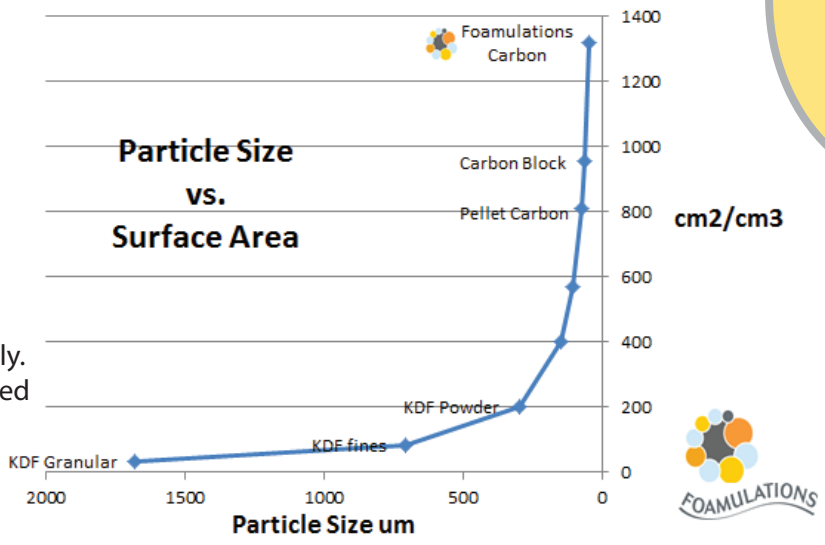
Featured Contaminant Selectivity

- Chlorine
- Pesticides
- Taste & Odor
- VOC's
- Herbicides
- DBP's

Activated Carbon is one of the oldest and most commonly used medias in liquid and gas phase purification. Activated carbon is a porous material that removes organic compounds from liquids and gases by a process known as "adsorption." In adsorption, organic molecules contained in a liquid or gas are attracted and bound to the surface of the pores of the activated carbon as the liquid or gas is passed through. Many varieties of activated carbon are available that each focus on a different set of contaminants, mainly due to the difference in their pore structure. Activated carbons can also be impregnated with other substances to achieve further levels of purification.

Foamulations' Increased Efficiency

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.



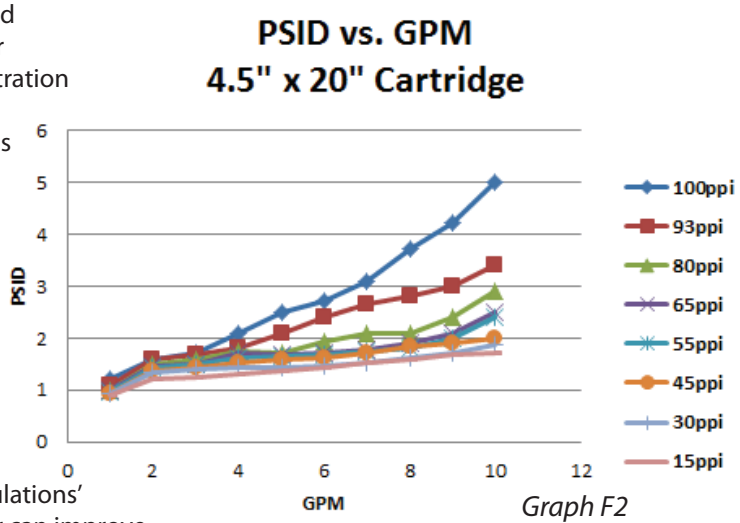
Graph F1

Loading Percentages and Capacity

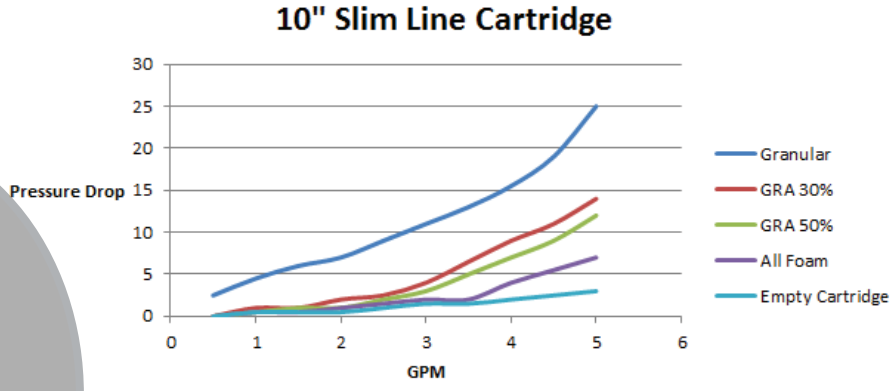
PPI	Media Loading	Percentage of Media	Expected Capacity
15PPI	.21 Grams/Cubic Inch	35%	40 Gallons/Cubic Inch
60PPI	.65 Grams/Cubic Inch	63%	165 Gallons/Cubic Inch
80PPI	1.2 Grams/Cubic Inch	70%	313 Gallons/Cubic Inch
93PPI	1.4 Grams/Cubic Inch	72%	325 Gallons/Cubic Inch
100PPI	1.65 Grams/Cubic Inch	74%	350 Gallons/Cubic Inch

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. 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. Graph F3 shows how using Foamulations' reticulated media as a dispersion or separation layer can improve the overall PSID. The percentages show the amount of reticulated media used in relation to the overall volume of the cartridge.



Graph F2



Graph F3

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 manner. 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.

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

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