

## Better Media, Better Treatment

AC-PF media is a proprietary blend of carbon media . This blend utilizes all high grade virgin carbon media to yield a media which performs as well as or better than any activated carbon media on the market

In recent field studies, AC-PF media has outperformed Calgon F400 in a number of locations. At minimum, this media would be considered equivalent to any activated carbon in the marketplace in removing PFAS compounds. AC-PF is available from Theia Water, typically at a substantial cost savings.

TW AC-PF media is a virgin granular activated carbon produced through a proprietary high temperature activation process under stringent quality control.

- Designed for many liquid phase applications to remove small and large organic molecules such as color bodies, TOC, and other impurity compounds
- Well suited for removal of perfluoroalkyl substances such as PFOS and PFOA from water
- Applicable to glycerin decolorizing and purification
- High adsorption capacity
- Meets US Food Chemicals Codex (FCC) standards
- Kosher and Halal certified
- Certified to ANSI / NSF 61

SPECS	US Standard Sieve		Mesh (mm)	12x40 (1.68 – 0.42)
	Oversize, +12 mesh	max	%	5
	Undersize, -40 mesh	max	%	5
	Iodine Number	min	mg/g	1000
	Moisture (as packed)	max	%	5
TYPICAL	Apparent Density	-	g/cm <sup>3</sup>	0.40
	Iodine Number	-	mg/g	1050
	Moisture (as packed)	-	%	2

Standard packing is 20 kg (44 lb.) bags or 400 kg (880 lb.) bulk sacks.  
All test methods are ASTM procedures where applicable.

## Simplicity and Sustainability through Innovation



Always consult with Safety Data Sheet (SDS) from suppliers and safety professionals.

## 1. Application

Perfluorinated compounds (PFCs) are used in manufacturing of fluoropolymer coatings and in firefighting foams at military bases. Consequently, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) have been detected in the water of 33 states and in over 100 Public Water Systems, at levels up to 1000 ppt or 1 ppb.

To address potential adverse health effects, the EPA has established a health advisory limit of 70 ppt for the combined concentration of PFOA and PFOS in drinking water. The EPA has further indicated that activated carbon adsorption technology is a preferred treatment method to meet the limit. As of 2017, fifteen military bases have adopted the activated carbon technology. Many more military bases are to be tested.

## 2. TW AC-PF media

- TW AC-PF media is 12x40 mesh granular activated carbon specially designed for PFOA/PFOS removal from water.
- TW AC-PF media outperforms competition in many aspects, as listed in table below, including 80% greater adsorption capacity, 50-70% longer column life, 25% less weight to fill column, and 35% less water flow rate required for back washing.
- TW AC-PF media has a pore structure that has substantially lower tendency to be fouled by other impurities in water, when compared to conventional coal and coconut shell based counterparts.

Parameter	TW AC-PF	US Domestically Produced Coal Based 12x40 Mesh
Adsorption Capacity at 1000 ppt, mg/kg	110	60
Column Life, Days to 70 ppt	81	48
Column Life, Days to 950 ppt	258	166
Weight to Fill Column, relative	75%	100%
Back wash water flow rate, relative	65%	100%
Tendency of fouling	Lower	Higher

\* 500 gpm, EBCT = 10 minutes, Inlet 1000 ppt; column life by simulation.

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