The Truth is in the Data: GAC is Effective for Removing Short-Chain PFAS

Reagglomerated bituminous coal-based granular activated carbon effectively and economically removes long- and short-chain PFAS to non-detectable levels.

There is some concern in the industry that granular activated carbon (GAC) is not effective for removing short-chain PFAS. While not all activated carbon is the same, Calgon Carbon has determined through extensive testing that bituminous coal-based FILTRASORB® 400 effectively and economically removes BOTH long- and short-chain PFAS to non-detect levels.

FILTRASORB®400 Reagglomerated Bituminous Coal-Based GAC

GAC is a hybrid mixture of a wide variety of graphite platelets that are interconnected by non-graphitic carbon bonding. The adsorptive capacity of GAC makes it ideal for removing harmful contaminants, such as PFAS.

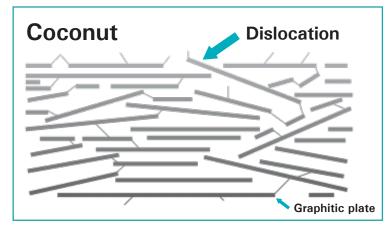
FILTRASORB® GAC is effective and proven for the removal of PFOA and PFOS. The short-chain PFAS compounds have an identical chemical structure to PFOA and PFOS, except that the short-chain compounds have a smaller number of carbon atoms in the molecule's backbone.

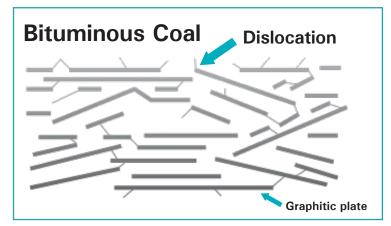
Because of these chemical similarities and an extensive body of testing, we stand by FILTRASORB® as an effective solution for short-chain PFAS removal.

FILTRASORB® 400 is an engineered material and the effectiveness for a given application is generally impacted by starting materials and processing methodology.

Because of the multitude of variables, performance column testing is always recommended to determine the ideal activated carbon product for a given application.

Selecting the correct GAC product for any application is absolutely critical and different product types cannot be used interchangeably.











What are short-chain PFAS compounds?

Per- and polyfluoroalkyl substances (PFAS) are a class of man-made chemical compounds known to be resistant to heat, water, and oils.

These compounds are frequently incorporated into a variety of industrial and commercial products, such as non-stick cookware, stain resistant clothing, food packaging and fire fighting foams.

In the U.S., the manufacture of PFOA and PFOS was phased out and replaced with new PFAS compounds, which are classified as "short-chain" compounds (these compounds contain seven or fewer carbon molecules).

A Rapid Small Scale Column Test (RSSCT), conducted by Calgon Carbon, concluded that reagglomerated bituminous coal-based GAC can remove both long- and short-chain PFAS compounds to below detection*.

*The detection limit varies with the PFAS compound, but the reporting limit (below which data are not reliable, marked as "J" values) is the same for all, but can vary by lab (Eurofins = 2.5 ppt MRL, Test America = 2.0 ppt MRL). GAC removes to below both consistently.

