

**COMPOSITE ENVISIONS KNOWLEDGE HUB
PRACTICAL AND INSIGHTFUL COMPOSITES INFORMATION**



CARBON FIBER VS ACTIVATED CARBON FOR FILTERS



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CARBON FIBER VS ACTIVATED CARBON

SIMILAR IN NAME ONLY

Activated carbon is a highly porous substance that attracts and holds organic chemicals inside it. The material is created by treated carbon fiber with an acid and burning the carbonaceous substance without oxygen. This makes a carbon “char”. The “char” is treated chemically or physically to develop an interconnected series of “holes” or pores inside the carbon. The great surface area of this internal pore network results in an extremely large surface area that can attract and hold organic chemicals.

Activated carbon attracts organic chemicals and holds them in. Cleaning water or air by “grabbing” and cleaning them of unwanted chemicals. Activated Carbon is very cost effective for treating large volumes of air or water to remove dilute concentrations of contamination. For a better perspective, doctors will likely instruct food poisoning patients to drink some water with activated carbon in it. The activated carbon will work to soak up the and remove the contaminants causing the sickness. Activated carbon can be used for filtering chemical impurities ranging from water supplies to gardening. Adding it to the bottom of a plant pot will repel insects and prevent mold growth.

The difference between carbon fiber used in composites and Activated Carbon, that would be used in filters, is processing. Carbon Fiber used in composites is crystalline in structure, making it an ideal candidate in composites. However, the processing placed through making Activated Carbon breaks down its crystalline structure, in turn making it useless to fabrication in composite parts.

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