

GRANULAR ACTIVATED CARBON



Granular Activated Carbon is a highly porous adsorbent material, produced by heating organic matter, such as coal, wood and coconut shell, in the absence of air. After the carbon is produced, it is crushed into tiny granules.

Activated Carbon is positively charged, so it has the ability to remove negative ions from water, such as Chlorine, tastes, odors, color and dissolved organic matter by absorption.

Activated Carbon is also in gas masks to remove harmful toxic fumes.

Adsorption (with a "d")

Adsorption is a natural process by which molecules of a dissolved compound collect on and adhere to the surface of an adsorbent solid. Adsorption with granular activated carbon occurs when the attractive forces on carbon's surface overcome the attractive forces of the liquid.

Granular Activated Carbon is an excellent adsorbent medium due to its high surface area, relative to its volume. Experts estimate one gram of commercial grade activated carbon has a surface area equal to 1,000 square meters.

In other words, one spoon full of activated carbon has the surface area equal to a football field!



Absorption (with a "b")

Absorption occurs when a substance penetrates a solid, similar to how water is absorbed by a sponge. This process is different than adsorption, whereby molecules of a dissolved compound collect on and adhere to the surface of an adsorbent solid, such as Activated Carbon.

Water treatment with Activated Carbon

As the water flows through Granular Activated Carbon, the adsorption process works in the following three stages. First, the contaminating substances adhere to the surface of the carbon; next, the substances move into the large pores; and finally, substances are adsorbed onto the inner surface of the carbon.

When the carbon hits its "breakpoint", it is referred to as "spent," and it is removed and replaced.

Granular Activated Carbon Filters for drinking and shower water

Granular Activated Carbon filters are used to improve the taste of water and to remove Chlorine, odors, color and organics. Activated Carbon is also used in shower filters to eliminate Chlorine damage to hair and to remove Chlorine fumes in shower enclosures.

Activated Carbon is a phenomenal material; used worldwide in the production of beverages, bottled water, beer, wine and for potable and waste water treatment.