

Allow us to introduce ourselves.
We are a manufacturer of select
Coconut Shell Activated Carbon
from the Philippines.



We are strategically located in one of the densest coconut producing regions in the Philippines and thus are assured of a continuous supply of raw materials.



We partner with farmers and farming cooperatives adopting technology to efficiently convert coconut shells into the finest activated carbon.



We periodically test our products in an on-site laboratory to ensure their high-quality. We also custom manufacture activated carbons to our client's specifications.



We combine engineering resources with efficient logistics to produce high quality products at competitive prices. We are committed to our client's satisfaction.

Green Carbon, Inc. is committed to the cleaning of the environment and protecting human health by producing coconut shell activated carbons which are efficient for air and water purification.

The company is owned and operated by engineering graduates from the Massachusetts Institute of Technology (MIT). Their technical expertise guarantees the high quality of our products.

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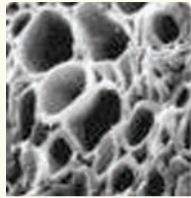
**Quality activated carbons
at competitive prices**

GREEN CARBON INC.

About Activated Carbon

ACTIVATED CARBON (AC) is an industrial chemical used for air and water filtration/purification. It is produced by the activation of coconut shell charcoal, wood, fruit kernels or sawdust.

Activation is the process of removing hydrocarbons adhering to the carbon material by means of chemical or thermal treatment. This is usually done in a rotary kiln, where the carbon material is heated to a temperature of about 800°C in an atmosphere of superheated steam. The reaction between the steam and charcoal takes place at the internal surface allowing the breakdown and removal of hydrocarbons, thus producing a highly developed network of tunnels and pores that are ideal sites for ADSORPTION.



Under a scanning electron microscope the pores appear like a porous bath sponge.

How it works

One gram of activated carbon is said to have the surface area of a 1,200 square meters - as large as a football field!

It is this vast internal surface that gives activated carbon its unique ability to adsorb a wide range of compounds from both the gas and liquid phases. Once the targeted compound is in contact with the activated carbon, it diffuses into its pores and is locked in place by weak Van der Waals forces. The process of transferring molecules from the gas or liquid phases onto a solid surface is called ADSORPTION.

Pores in activated carbon vary in size and can be classified into three types: micropores which are less than 20 nm; mesopores which are 20-200 nm and macropores which are 200 nm and above. The meso and macropores are the tunnels that lead to the micropores.

When used for air or water purification it works on the same principle as a sieve, polluted air or liquid is passed through a screen of activated carbon that absorbs toxic matter.

AMONG THE CONTAMINANTS EFFECTIVELY REMOVED BY ACTIVATED CARBON are:

arsenic, asbestos, benzene, atrazine, carbon tetrachloride, chlorine, chlorobenzene, chromium, copper, ethylbenzene, ethylene dibromide, haloketones, hexachlorobutadiene, hydrogen sulfide, iron, mercury, dichlorobenzene, radon, pentachlorophenol, styrene, toluene, xylenes, zinc and trichloroethylene.

Why Coconut Shell AC is Superior

Demand for Coconut Shell Activated Carbon is projected to grow with stricter environmental legislation and the rise in living standards requiring improved air and water purification.

Coconut shell activated carbon have the following inherent qualities that make them superior to activated carbons from other sources:

- **High hardness levels (> 95%):**
Ensures superior material handling and minimizes dust generation.
- **High surface area (up to 1300 m²/g):**
Gives high adsorption efficiency.
- **High microporosity (<20 Angstroms):**
Gives high adsorption and retention capacity.
This is important for the removal of low-molecular weight organics and trace levels of contaminants.
- **Low ash content:**
Gives high purity preventing contamination of adsorbates.
- **High density:**
Provides for economical containment for the the same level of filtration.

Our Products

GRANULAR ACTIVATED CARBON

Granular activated carbon is produced as irregularly shaped particles that can be used in both liquid-phase and gas-phase applications. Some advantages of using granular activated carbon over powdered activated carbon are:

- its hardness which makes it longer-lasting and therefore can be reactivated and re-used
- its ease in handling and
- its efficiency in the purifying large volumes of gases or liquids.

We offer this product in the following mesh sizes: 4x8, 8x30, 12x30. Other sizes are also available upon request.

ACID WASHED ACTIVATED CARBON

Acid washed coconut based activated carbon is made from from select grades of select grade of coconut shell which is acid washed after activation. It is specially designed to remove difficult to adsorb organics and combines higher microporosity with sufficient transport pores to permit superior loadings of highly soluble organics. We offer this product in the following mesh sizes: 16x30, 20x40 & 35x80.

PACKING

Our products are packed in 25 kg woven polypropylene bags or 500 kg bulk bags.

Applications

Liquid-Phase Applications

- Refining and bleaching of vegetable oils
- Purification of potable and beverage water
- Treatment of municipal and industrial waste water
- Remediation of contaminated ground water by absorbing pesticides
- Purification of aquarium and pond water
- Purification, extraction and adsorption of pharmaceuticals and chemicals
- Solvent recovery
- Removal of color and odor contaminants in food industries

Gas-Phase Applications

- Air purification systems like indoor air conditioning and industrial air cleaning systems
- Adsorption of hydrocarbon vapors and volatile organic compounds (VOCs)
- Solvent vapor recovery
- Clarification and purification of effluent and industrial gas
- Automotive evaporation control systems
- Gas masks and cigarette filters

Gold Recovery

Processes using activated carbon have been adopted to recover gold from low grade ores and residue streams are:

- Carbon-in-pulp (CIP)
- Carbon-in-leach (CIL)
- Carbon-in-column (CIC)

