

COCOTECH

VADIVEL GROUP HISTORY

Our Journey began with our founder Shri.S.Vadivel who established VADIVEL FIREWORKS in 1945. VADIVEL FIREWORKS resisted the economic struggles of India in 1960's. Even before the period of communication and transport infrastructure, our founder had efficient methods of production and marketing. We were one of the various 'Indigenous Indian Pyro Technique' companies that ventured into the market during the British rule. We at VADIVEL look at the firework Industry with a totally different facet and we compete in the market with advanced technology. Machinery and equipments have all been brought under one roof to maximize efficiency.



Our Group Concerns

- Vadivel Pyrotechs Private Limited
- Vadivel Electronics Private Limited
- Vadivel Chemtechs
- Anitha International Educational Trust
- Anitha Matriculation Higher Secondary School
- Vadivel Cocotech Private Limited



Vision & Mission

The Mission of “VADIVEL COCOTECH” is to develop and apply coconut shell activated carbon in process related to protect people and the environment from the contaminants in water, air, food and industrial processes, while developing and maintaining a highly motivated workforce that has a business to meet customer’s needs by providing high-quality, cost-effective products and services for purification, separation and concentration in the processing of liquids and gases. We have state of the art system to process Acid Washed Carbons. Our machineries can produce carbon from mesh sizes varying from millimeters to microns range.



Our Values

- We have configured an excellent state of the art activated carbon manufacturing facility.
- We train our factory personnel to be a proficient work force.
- We are an environmentally conscious and responsible company.
- We practice sustainable manufacturing methods.





PRODUCTS & SOLUTIONS

Live Pure with Our Products



GoldCarb

To recover gold and other precious metals through extraction process, our GoldCarb series activated carbon exceeds our customer's expectations.



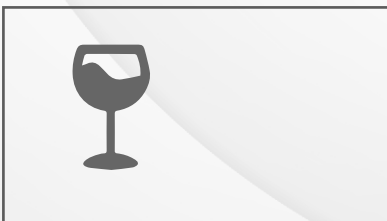
AquaCarb

Our granular activated carbon of AquaCarb series is used in the application of Drinking-water purification, recovery and re-circulation process and in the treatment of waste liquid streams.



EcoCarb

To prevent humans and environment from toxic gases and industrial water gases, our Eco Carb series activated carbon play a vital role in the gas phase treatments.

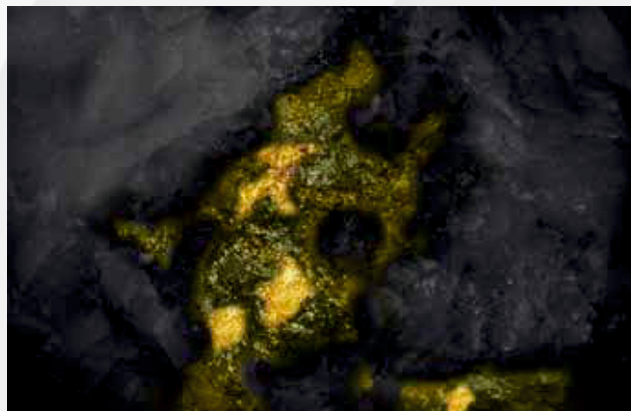


PureCarb

PureCarb activated carbon is used in the Food, Beverages, edible oil, juices and in chemical industries to remove chemical impurities, odours and toxic substances. It improves taste and color and helps in removing major parts of impurities are eliminated by this series.



GoldCarb



Mines

Every particle in the mining industries is very important. Our GoldCarb series is specially made with high adsorption and low platelets with high abrasion resistance. Our activated carbons improve the kinetic (R&K) values of adsorption and reduces tail loss in the circuit due to attrition.

Charcoal Selection

We produce this activated carbon with extra care. Best quality of coconut shell charcoal are taken for process which will resist in the activation process. Feed selection play a vital role in eliminating attrition losses in gold extraction process.

PARAMETER	SPECIFICATION	TEST METHOD (ASTM)
As Calc. CTC	45-58%	D 5742
Butane Activity	17.6-22.7%	D 5742
Hardness	>99%	D 3802
Dry Apparent Density	480-570g/l	D 2854
Total Ash Content	<4%	D 2866
Attrition	<2%	-
Particle Size (<12 mesh)	<2%	D 2862
Platelets Content	<7%	-

We provide custom designed products for specific customer applications.

Products of GoldCarb RE Series

GoldCarb RE - 6x12 mesh & 8x16 mesh | GoldCarb RE - 45 | GoldCarb RE-50 | GoldCarb RE-55
GoldCarb RE-58 | Etc.



AquaCarb



Global Challenge

Water is the most important constituent of the life support system because on one hand, it is vital for the maintenance of all forms of life and on the other it helps in the movement, circulation and cycling of nutrients in the biosphere. Water is essential for power generation, navigation, irrigation of crops, disposal of sewage, etc. Coupled with population explosion, rapid industrialization and unplanned urbanization that releasing a lot of waste

into water bodies there by degrading the quality of water.

Global population is increasing day by day but the supplied water qualities are not meeting the quality demand in many countries. In many countries, the water sources are contaminated and one of the greatest challenges is to supply high quality water. We are concerned about how the water taste and odour might vary and that might affect humans as well as faunas health. That is why we provide high quality of activated carbons for water purification.

Municipal Water Treatment

When it comes to drinking water, chlorine is added to kill bacteria which makes it's taste and smell bad. Activated Carbon is very effective in the removal of organic gases and residual chlorine.

Industrial Water Filtration & Treatment

Industrial waste that is released into the water can carry a variety of pollutants that can adversely affect the ecology of receiving lakes and rivers. To meet legal requirements related to discharge of waste water and to prevent the migration of contaminants and pollutants, activated carbons is used as a filter media and controls the contaminants from entering into our ecology and safe guards the public.

Activated carbon is one of the most cost- effective solution that is used for the removal of a wide range of contaminants. We are committed to prevent humans and faunas from those contaminants.



For many years, activated carbons have been used as a filter media based on its absorption capacity because it absorbs contaminants and organic chemicals to provide clean and pure water.

Activated carbon is very effective in the process of removing impurities.



<u>PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST METHOD (ASTM)</u>
Iodine Number	1000 - 1200 mg/g	D 4607
As Calc. CTC	50-60%	D 5742
Butane Activity	19.6-23.5%	D 5742
Hardness	>97%	D 3802
Dry Apparent Density	450-600g/l	D 2854
Total Ash Content	<4%	D 2866

Products of AquaCarb FM Series

AquaCarb FM - 8x30 mesh | AquaCarb FM - 10x20 mesh | AquaCarb FM - 10x30 mesh |
AquaCarb FM - 12x20 mesh | AquaCarb FM - 12x30 mesh | AquaCarb FM - 12x40 mesh |
AquaCarb FM - 20x30 mesh | AquaCarb FM - 20x40 | Etc.



EcoCarb



Air pollution is one of the most dangerous forms of pollution. It is a biological, chemical, and physical alteration of the air that occurs out of smoke, dust or any harmful gases entering into the atmosphere and make it difficult for all the living beings to survive, as the air becomes contaminated. Burning of fossil fuels for agricultural activities, mining operations, exhaust from industries & factories and household cleaning products entail air pollution. People release a huge amount of chemical substances in the air every day and the

chemical makes are alarming. It causes global warming, acid rains, respiratory & heart problems and eutrophication . A lot of wildlife species are forced to migrate from their habitat in order to survive.

Technologies of our company help to ensure that peoples breath clean air.



History of using Carbon in Filtration

How did humans figure out that carbon can be effective at filtering contaminants?

It's likely that the earliest use of carbon could be to remove impurities in smelted metal for the manufacturing of bronze. The Egyptians appear to have been the first ones to use it in a medical way, to remove the odours associated with infections.

In World War I, gas masks utilized charcoal to filter out some of the deadly gases used against the troops, but it was only effective against some of the toxins. The production and the use of activated carbon grew dramatically only afer World War II, eventually leading to the development of modern activated carbon in air filters.





Activated Carbon Filter

Activated Carbon filters play a vital in the process of chemical industries, research centres, toxicology centers, hospitals, sewage exhaust and gas purification. Activated carbon filter can remove odour, chemical toxic gas, smoke and fumes up to 99.9%.



Car Air Filter

Emissions from various interior components of automobiles as well as emissions from exhaust fumes carried by ventilation supply air significant sources of harmful air pollutants that could lead to unhealthy human exposure due to their high concentrations inside vehicles. Activated carbon filters absorbs smelly odours and exhausts fumes before they enter inside the vehicle. Activated carbon filters absorbs significantly higher amount of air pollutants than regular filters because activated carbon has a very capacity for trapping noxious gases.



Cabin Air Filter

Chemicals, smog, ozone, fumes from cooking, pet dander and tobacco can cause irritation and allergy to an asthmatic. Particulates such as pollens or pet dander are the main irritants for many households. Activated carbon does an outstanding performance in odour control, toxin removal and chemical fumes.





Cartridge Mask Filter

Activated carbons filled cartridge mask provides respiratory protection against certain organic vapour or acidic gases.



PARAMETER	SPECIFICATION	TEST METHOD (ASTM)
Iodine Number	1000-1250 mg/g	D 4607
As Calc. CTC	50-65%	D 5742
Butane Activity	19.6-25.5%	D 5742
Hardness	>98%	D 3802
Dry Apparent Density	430-570g/l	D 2854
Total Ash Content	<4%	D 2866

Products of EcoCarb AF Series

EcoCarb AF - 3x6 mesh | EcoCarb AF - 3x10 mesh | EcoCarb AF - 4x8 mesh |
EcoCarb AF - 12x30 mesh | EcoCarb AF - 12x40 mesh | EcoCarb AF - 18x40 mesh |
EcoCarb AF - 20x30 mesh | EcoCarb AF - 20x40 mesh | EcoCarb AF - 20x70 mesh | Etc.



PureCarb



Color, aroma and taste are the most important things to be maintained in all the food and beverage industries since color are definitely linked with tastes. Activated carbon removes contaminants and impurities such as color and odour from sweeteners, food liquids, syrups, beverages, glycerin, amino and organic acids. Activated carbons are used at several stages the brewing of beer. When it is used in the brewing process directly, activated carbon modifies the color and improves the taste & odour produced by phenols and by the autolysis

of yeast and infections. In vodka production, activated carbon can reduce the organic impurities (it is measured by optical density).

In wine production the activated carbon helps to adjust the color and remove undesirable components originating from molds, cork, yeast and the container itself used in fruit beverage industry to remove undesirable taste causing substances and colour changing chemicals such as poly phenols, melanoidin, etc that get added to these fruit juices during their manufacturing process. Most beverage manufacturing industries utilizes water drawn from municipality, deep well & ground water.

Normally, a disinfectant such as chlorine, ozone or chloramines are Activated Carbon play a vital role in all beverages produced. Food industries demand the most stringent levels of product purity that has to be maintained. PureCarb meet all the required standards.

PARAMETER	SPECIFICATION	TEST METHOD (ASTM)
Iodine Number	1000-1200 mg/g	D 4607
As Calc. CTC	50-60%	D 5742
Butane Activity	19.6-23.5%	D 5742
Hardness	>98%	D 3802
Dry Apparent Density	430-580g/l	D 2854
Total Ash Content	<4%	D 2866

Size can be offered from 100 microns to 2500 microns.

Products of Pure Carb PU Series

PureCarb PU - 8x30 mesh | PureCarb PU - 10x20 mesh | PureCarb PU - 10x30 mesh |
PureCarb PU - 12x20 mesh | PureCarb PU - 12x40 mesh | PureCarb PU - 12x30 mesh|
PureCarb PU 20x40mesh | Etc.



Washed carbons



These carbon are produced for the usage in ultra-pure water treatment systems requiring low conductivity and exceptionally high purity. Activated carbon is also specifically designed for the removal of heavy hydrocarbons from recovered condensate. The acid washing process removes soluble silica from the matrix of the activated carbon to prevent leaching into the condensate also it is suitable for drinking water and food grade applications. They are also used in the paramedical and chemical industries.

These products are washed with acid during the manufacturing process resulting in very low acid soluble iron content. (Ultra-pure activated carbon)

Some of the benefits of acid washed carbon are de-chlorination of water, better taste, removal of bad odours, removal of color from water, removal of organic substances, etc. Acid washed carbon has an extensive internal structure, neutral surface, maximum hardness, extended operational life, high volume activity and rapid pH stabilization.

we provide custom designed products for specific customer applications.

<u>PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST METHOD (ASTM)</u>
Iodine Number	1000-1200 mg/g	D 4607
As Calc. CTC	50-60%	D 5742
Butane Activity	19.6-23.5%	D 5742
Hardness	>98%	D 3802
Dry Apparent Density	450g/l	D 2854
Total Ash Content	<1%	D 2866
pH	5-7	D 3838

Products of Acid Washed AquaCarb AW Series

AquaCarb AW - 8x30 mesh | AquaCarb AW - 10x20 mesh | AquaCarb Aw - 10x30 mesh |
AquaCarb AW - 12x20 mesh | AquaCarb AW - 12x30 mesh | AquaCarb AW - 12x40 mesh |
AquaCarb AW - 20x30 mesh | AquaCarb AW - 20x40 mesh | Etc.





MANUFACTURER OF COCONUT SHELL ACTIVATED CARBON

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Manufactured by

