

## Activated Carbon Fiber (ACF)

----- Edit by Candy



HORTON Activated Carbon Fiber (ACF) is a new highly efficient functional adsorbent material. It can be made into different patterns like felt and fabric. Compare to Granulated Activated Carbon (GAC), the efficiency of adsorption systems of HORTON ACF is higher and it is easy to be used

HORTON ACF provides widely applications such as industrial processing, environmental protection, and absorptive material for medical using, particularly for chemical agent / gas resistant using

### Properties of Activated Carbon Fiber (ACF)

The surface area of HORTON Activated Carbon Fiber (ACF) is extremely large and its micro pore configuration is similar to long and narrow. This makes the capacity of adsorption large. Physical adsorption of ACF makes its regeneration and degeneration process outstanding and below are characteristics

- ⊕ ACF's large surface area and average aperture of micropore makes its fast speed of adsorption and desorption.
- ⊕ ACF also has excellent adsorption to low concentration substance, because its

- adsorption forces and unit adsorptive volume
- ⊕ The good tensile strength of carbon fiber can be made into different patterns, like paper, non-woven, a honeycomb structure and corrugated cardboard.
- ⊕ ACF itself is not easy to become powder so it will not cause second pollution.
- ⊕ It can reach to the expectable efficiency in short time because its Low density and small loss of press.
- ⊕ ACF's thin and light adsorption layer allow it be used in the small treatment with high efficiency.
- ⊕ ACF can also be applied as fuel cell electrodes material.
- ⊕ Without reducing its adsorption function, its easy to be regenerated. And it can be used for very long time.
- ⊕ Ozone Removal application.
- ⊕ ACF has also a function of bacteriostasis.
- ⊕ ACF can be a deoxidizer to recycle the precious metal.
- ⊕ acid-proof, alkali-proof.

### Physical properties comparison of kinds of activated carbon

Type	HT-1000	HT -1300	HT -1500	HT -1600
Surface Area (m <sup>2</sup> /g)	900-1000	1150-1250	1300-1400	1450-1550
Benzene Absorption Capacity (w t%)	30-35	38-43	45-50	53-58
Iodine Absorption (mg/g)	850-900	1100-1200	1300-1400	1400-1500
Methylene Blue (ml/g)	150	180	220	250
Pore volume (ml/g)	0.8—1.2			
Average Pore Size (A°)	17—20			
PH	5—7			
Ignition Point (°C)	> 500			

### Application

- Recovery of Organic Compounds and Solvents

ACF can be used in gas / air separation, recovery of organic compounds and solvents, especially for caustic nitrides, reaction solvent low boiling point solvent; The speed of adsorption and desorption are fast and the percentage of recovery can be reached to 97%.

■ **Air purification**

ACF can eliminate malodorous substance in the air, especially for aryl substance which will generate carcinogens.

■ **Wastewater treatment**

ACF is also suitable to be applied in organic wastewater treatment, like substance content phenol, medical waste, etc. which are hard to decompose by organism. With large quantity of adsorption volume, fast speed of adsorption, excellent desorption function, and easy to regenerate, ACF can be used in a small, continuous, simple design condition which cost low and do not make second pollution.

■ **Water purification**

Deodorizing and de-coloring Applications in different industrial field, like food and beverage, pharmaceutical, sugar-making, wine-making. Besides, it also can be applied in super-pure water treatment system of electronic industry and aqueous filtration treatment etc

■ **Domestic products**

ACF can be a refrigerator deodorizer and keep food fresh

If there is any inquiry, please feel free to let us know!

Hope we will have good business relationship in the future.

Thanks and best regards,

Candy

Graphite Department

**Dalian Horton International**

Tel: +86-411-82336577

Fax: +86-411-82336278

E-mail: [candy@chinahorton.com](mailto:candy@chinahorton.com).