

#### **14,Viscose Based Activated Carbon Fiber Air Filter Felt Media**



##### **Main Products:**

Activated Carbon Fiber, Anti-Dust Acf Mask, Acf Filter Bag, Acf Felt, Acf Cloth

The product is Using high-tech material--Activated carbon fiber(ACF), the raw material of activated carbon fiber is 100% viscose based( rayon-based fiber),obtained by the pre-oxygen, high-temperature carbonization and activation process.and it is an excellent high adsorption material,it can effectively adsorb Benzene.Formaldehyde etc.

It is an excellent high-temperature insulation material, which not only has the other types of general characteristics of the carbon felt, but also has the low-density, low thermal conductivity, high temperature resistance, corrosion resistance and a series of excellent performance. It is suitable as thermal insulation materials, corrosion-resistant materials, and processed into graphite carbon felt. It can adsorb organic gases (NOX, SO<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, CO, CO<sub>2</sub>) etc. the adsorption is larger than granular and powdered activated carbon.



## **ACF Characteristics**

### **1) High adsorption capacity**

ACF adsorption capacity for organic gases and odour substances (such as butyl mercaptan etc.) is better than the granular activated carbon (GAC) about a few times to several decade times, and the inorganic gas also have better absorption capacity, and inorganic material solution, dyes, organic and noble metals there are 5-6 times higher than the GAC. On the microbes and bacteria also have a good absorption capacity (such as coli on the absorption rate of 94-99 %), and Adsorption in low concentration possess particularly good adsorption capacity. In addition, the adsorption capacity of ACF is Super Excellent for the gases concentration below 1 ppm (v/v).

The absorption of gaseous pollutants from gaseous phase is very quickly, the absorption from liquid phase can very quickly reach equilibrium, the absorption rate several times to a few hundred times higher than the GAC.

### **2) Convenient and easy regeneration**

Being through many times heating regeneration, the ACF still kept a high adsorption capacity.

### **3) Being a best heat resisting property**

The ACF can exist upon 1000°C in inert gases and its Ignition temperature is  $\geq 500^{\circ}\text{C}$  in air.

4) Acid-resisting, alkali-resisting, there is better electric conductivity and chemical stability.

5) The total ash content is very low

6) Easy to profile of activated carbon fiber can be made into different shape, like felt, silk, cloth and paper etc..

## **Application of ACF**

### **1) Solvent recovery system**

ACF can be used in solvent recovery from air stream such as the vapor of Benzene, ketone, ester, petroleum (particularly for the corrosive chloride, solvents of high reactivity and low boiling- point solvents). The fast adsorption and



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desorption, high capacity for treatment solvents air stream that the recovery capacity can reach to 97%.

2) ACF can be used in military protection such as: It can be made of anti-chemical clothes and the NBC protective suits, gloves, dressing and bandages etc.

3) Air cleaning

The odors in the indoor air includes Ammonia, Methyl mercaptan, Hydrogen sulfide, Dimethyl disulphide, trimethylamine, etc. Using ACF as adsorption material removes hazardous Substance and deodorize more efficient, and particularly Aromatics which may cause cancers.

4) Wastewater treatment

ACF is particularly suitable for treating the wastewater contaminated by Phenol, thiol and other chemical compound which have been preliminarily reduced to a certain level by biological technology. Thanks to ACF fast velocity, high adsorption capacity, and easy regeneration, and ACF can reduce the cost of installation and avoid second pollution.

5) Drinking water purification

ACF is widely used as odor removing material in the production of foods, medicines, beverages, sugar manufacture and brewery Industry. It is an ideal material as purifying medium in the production of drinking water and super pure water for industrial use.

6) Application in electronic industry and energy

ACF can be used to make capacitor, storage battery and electrode materials and exothermic material.

7) ACF can be made into adiabatic materials, anti-corrosive materials and heat insulating material.

8) Living goods



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ACF can be made into refrigerator deodorizer, retain freshness devices for fruits and vegetables, household water-cleaner, antibiotic shoe-pads, anti-poison mask and clothes, cigarette filter, etc.

### 9) Medical and health protection application

Medical bandage, Woundplast and sanitary towel etc.

### Specifications

Model	Specific surface area	Thickness	Width	Application
ACF-1000	BET $\geq$ 900m <sup>2</sup> /g	0.8-1mm	1.1m	mask lining, bag lining
		1-1.5mm	1.35m	bag lining filter
ACF-1100	BET $\geq$ 1000m <sup>2</sup> /g	1.5-2mm	1.2m	drink water filter pad disk Blood filter material
ACF-1300	BET $\geq$ 1200m <sup>2</sup> /g	2-2.5mm	1.2m	drink water filter pad disk Sanitary dressing material Blood filter material
		3-4mm	1.2m	drink water filter pad disk Blood filter material
ACF-1500	BET $\geq$ 1300m <sup>2</sup> /g	3-4mm	1.15-1.17m	Solvent recovery material
		3.5-4.5mm	1.15-1.17m	Solvent recovery material
ACF-1600	BET $\geq$ 1400m <sup>2</sup> /g	1.4-2.2mm	1-1.1m	drink water filter pad/disk
		2-2.5mm	1.2m	drink water filter pad/disk Water filter core material
		3-4mm	1.17-1.2m	Solvent recovery material Blood filter material Wound dressings
ACF-1700	BET $\geq$ 1500m <sup>2</sup> /g	3-4mm	1.17-1.2m	Solvent recovery material
ACF-1800	BET $\geq$ 1600m <sup>2</sup> /g	3-4mm	1.17-1.2m	Solvent recovery material
ACF-1900	BET $\geq$ 1700m <sup>2</sup> /g	3-4mm	1.17-1.2m	Solvent recovery material
ACF-2000	BET $\geq$ 1800m <sup>2</sup> /g	3-4mm	1.17-1.2m	Solvent recovery material