



Flexzorb™



Industry

Flexzorb™ Activated Carbon Cloth for Industrial Sectors

Flexzorb™. Filters. Purifies. Protects.

Flexzorb™ is widely used by manufacturers internationally, making us the leading provider of activated carbon cloth for industry applications.

The most adsorptive material known to science, Flexzorb is used to support the manufacture of a wide range of products, in the areas of:

- **filtration, separation and purification**
- **respiratory protection**
- **electrical energy storage and conduction**

Consisting purely of activated carbon, Flexzorb is lighter and adsorbs more quickly and effectively than other, carbon-loaded materials, which contain less activated carbon.

Customised to your needs

Flexzorb is available in woven and knitted formats, which have different attributes appropriate to specific applications:



- **Flexzorb knitted cloth** is a fine, dense fabric that does not fray when cut.



- **Flexzorb woven cloth** offers higher air permeability, especially suitable for filtration applications.



The Flexzorb™ story

Flexzorb™ has its origins in the first activated carbon cloth (ACC), developed in the 1970s. It was initially used - and still is to this day - as a protective layer in military clothing and masks against chemical, biological, radioactive and nuclear (CBRN) agents.

Today, Flexzorb is the world's leading superior 100% activated carbon cloth, used globally in a wide range of applications by industry, defence and medical sectors. These include industrial filtration processes, fuel cells and medical wound dressings, among many others.

Flexzorb can also be:

- impregnated with various chemistries for added sensitivity to adsorbing inorganic molecules
- laminated to custom backing textiles and films in controlled environment conditions
- produced in pre-cut shapes and different widths.

Key to its function are electrostatic forces within Flexzorb. These adsorb* large volumes of molecules from various gases and liquids. Thus, it acts as a high purity filter, a separation method or a protective layer.

Its highly microporous structure means that Flexzorb has a very large surface area. To put this in perspective, just 1g of Flexzorb has a surface area of around half the size of a soccer pitch. Combined with electrostatic forces, this affords Flexzorb its very high adsorption capacity and ability to adsorb quickly.

*Adsorption is the process of attracting molecules on to a surface, rather than into something. It is analogous to iron filings being attracted on to a magnet.



Flexzorb™. Industry Applications.

Rapid-adsorption, high-purity filter media.

In filtration applications, Flexzorb activated carbon cloth offers an unrivalled combination of rapid adsorption and very high-purity filtration.

- Electrostatic forces draw and trap gas, vapour and liquid molecules on Flexzorb's surface
- Microporous structure means rapid adsorption, high-purity filtration
- Permeability enhances airflow.

Its fast reaction and adsorption kinetics make Flexzorb highly suitable where short contact time, high airflow speeds and small bed depths are required. It is also suited to high humidity environments as its adsorption capacity is less adversely affected by moisture.

Available in a range of sizes, weights and specifications, Flexzorb can also be laminated to support media to allow pleating for manufacturing filtration cartridges.

Flexzorb is suitable for the following filtration applications:

- Air conditioning
- Anti-pollution and respiratory masks and escape hoods
- Anti-tarnish cloth for conservation
- Cabin air filtration
- Catalyst media
- Emission control
- Purification filters
- Sensor protection
- Solvent recovery
- Regenerative filter
- VOC filtration
- Water filtration and pollution abatement systems.

Other applications

Besides its adsorption capabilities, Flexzorb is conductive. Further applications include:

- Alternative energy
- Electrodes
- Energy storage and fuel cells.

About Chemviron Cloth Division

Flexzorb™ is produced in the UK by Chemviron Cloth Division, the world's leading manufacturer of 100% activated carbon cloth.. Chemviron is the European operation of Calgon Carbon, the world leader in the production and development of activated carbon in granular and cloth forms. At our Innovation Hub, we continually research and develop new attributes of Flexzorb for ever-widening applications.

Contact us

To find out more about Flexzorb or to discuss your specific applications, please contact us and we will be happy to help.

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