



Acticarbone®

Pure Water. Clean Air. Better World.





# A Wide Range of Products for Processing Your Liquids

Ultra-pure powdered activated carbon of vegetal origin. For your batch processes, several grades are proposed:

- Physically (steam) or chemically (phosphoric acid) activated powder.
- Washed powders boasting of very high purity such as “the Pharma range.”
- Powders suited to specific requirements with controlled pH or impregnated in order to limit dust during usage.

Mean Characteristics*	POWDERED GRADES											
	ENO PC	CPL	CPW	CSA	SCW	4S	3SW	3SA	2SW	L4S	L3S	L2S
Porosity	macro			macro-meso		meso						
Discoloration	+++			+++		+						
Purification	++			++		+++						
Decontamination	+			+		++						
pH	Acidic (5)				Neutral (7)	Basic (10)		Acidic (5)	Basic (10)	Neutral (7)		
N2-BET** (m²/g) or specific surface of adsorption	1400–1800			1400		1000–1200				1000–1200		
Mean ash content (%)	3			4		3				<1		
Permeability (mDa)	20–60			70–110		220–300				140–220		



\*\*The BET surface area does not solely account for the choice of the activated carbon suited to a given application. It has to be combined with the other characteristics of the activated carbon for the determination of the most effective carbon.

Highly pure granular activated carbon of vegetal origin. For your continuous processes, two grades are proposed:

- Highly activated chemical grains

Mean Characteristics*	GRANULAR GRADES	
	BGE	BGX
Porosity	macro	
Discoloration	+++	
Purification	++	
Decontamination	+	
pH	Acidic (5)	
N2-BET** (m <sup>2</sup> /g) or specific surface of adsorption	1550–1650	
Ash content (%)	2.5	
Density in place (g/cm <sup>3</sup> )	0.22	0.24

Calgon Carbon assists its customers throughout the life span of its activated carbons:

- Selection
- Provision
- Performance diagnosis
- Laboratory test and pilot test
- Troubleshooting
- Assessment of the life span of the activated carbon
- Reactivation



# Purification by Activated Carbon

Activated carbon is an inert product made of carbon. It has a highly developed porous structure and a considerable inner surface area (700–2000 m<sup>2</sup>/g). Activated carbon can thus trap unwanted molecules present in liquids and gases in its pores. This is the adsorption phenomenon.

## How to Choose Your Activated Carbon?

The selection of the best suited activated carbon requires a good knowledge of the application as well as the nature and concentration of the impurities to be removed. Based on these elements, the Calgon Carbon technical department will guide you towards the right grades of Acticarbhone® activated carbons that will be effective for the adsorption of these impurities. Laboratory tests help in confirming these recommendations (see graph below). Powdered carbon is suited for many purification processes, ranging from decolorization to removal of odor and enhancement of taste.

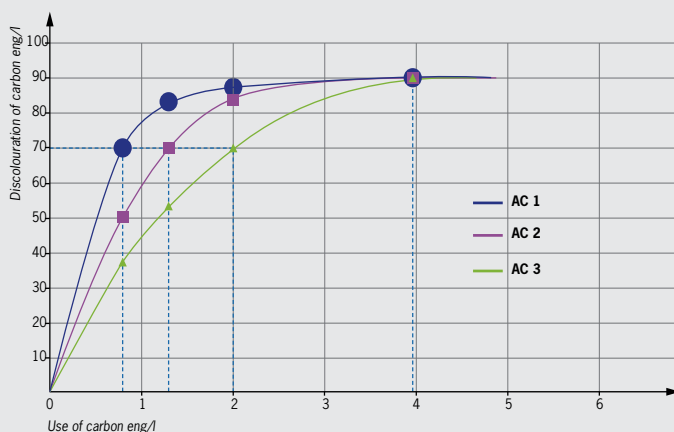
**Porosity** (*micro, meso, macro*)  
Suited to the size of the impurities to be adsorbed

**pH** (*basic, neutral or acidic*)  
Similar to the pH of the liquid to be treated

**Level of Activation**  
(*high, increased or remarkable*)  
Helps in optimizing the use of activated carbon

**Purity** (*high, ultra or pharma*)  
Helps in optimizing the use of activated carbon

**Permeability**  
Ensures proper filterability of the carbon



## Results of a Laboratory Test

This graph represents an example of a comparative assessment of three activated carbons (AC1, AC2, AC3).

The same liquid is treated with decreasing doses of three activated carbons. With the 4g/l dose, all the three carbons display the same performance. It is only by reducing the dose that the difference in performance is seen. We can clearly see that AC1 carbon is much more effective. This shows how important it is to conduct tests with doses that are much lower than those used with another carbon for a process which is already being implemented.

# The Manufacturing of Acticarbone® and Anticromos® Activated Carbons

Calgon Carbon markets activated carbon recognized worldwide for its effectiveness and consistency.

Located at the heart of the forêt des Landes (France), in the largest forest of Western Europe, the Parentis-en-Born plant is run in accordance with environmental standards (ISO 14001).

The activated carbon of the Acticarbone® and Anticromos® ranges are produced from vegetal and renewable raw material.

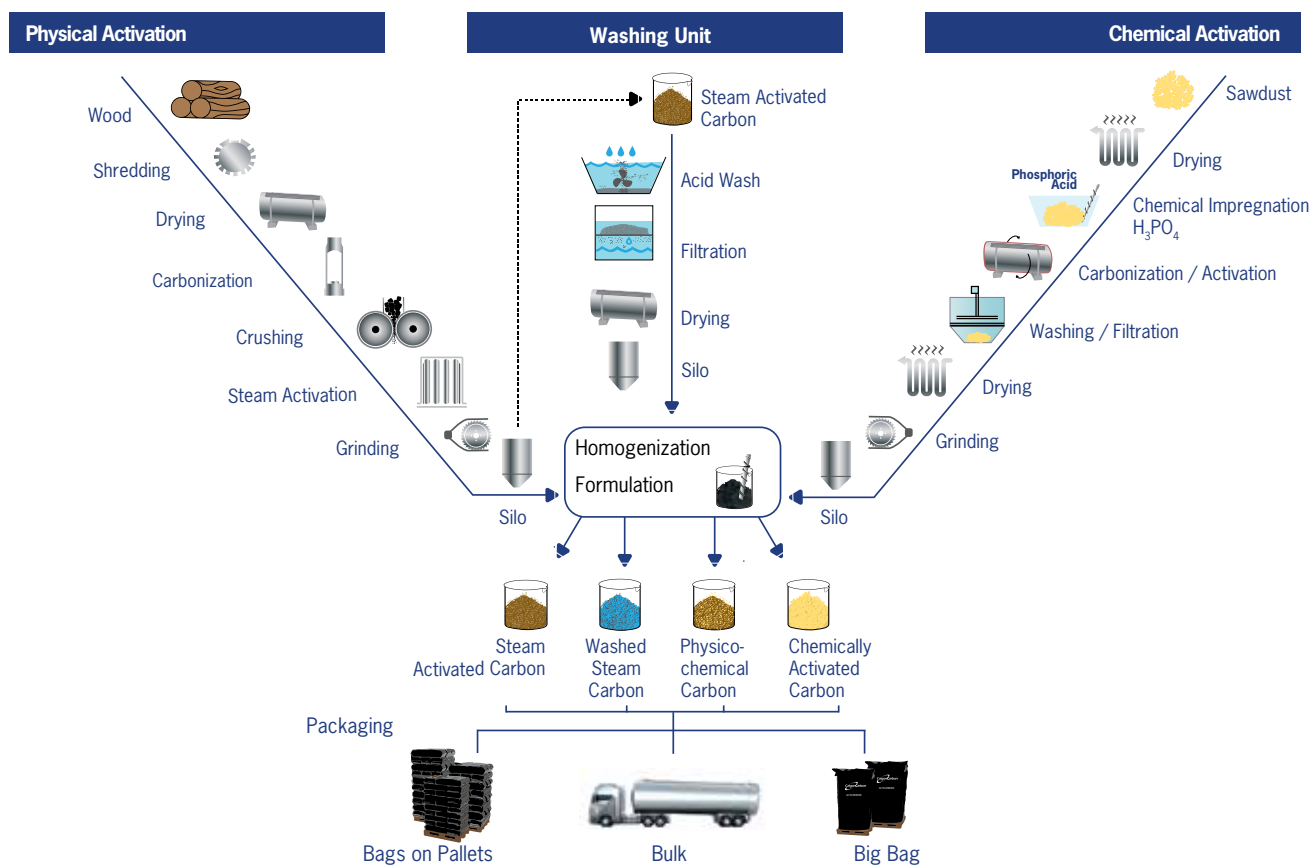
This raw material associated with our mastery over the manufacturing process imparts exceptional purity and adsorption properties to the Acticarbone® and Anticromos® activated carbon.

Activated carbon helps in decolorization, purification, decontamination and deodorization of a wide range of fluids in several industries such as food and beverage processing, pharmaceutical production, the fine chemistry sector and environmental applications.

It is implemented and used as a technological auxiliary product in industrial purification processes and is available in 3 forms: Powdered, Granular and Pellets.










































































































































































































































































































































































































The Parentis en Born plant at the very heart of the forêt des Landes in France.



# Markets & Applications

For the utmost optimization of your processes, Calgon Carbon offers a comprehensive activated carbon range meeting all your liquid treatment requirements.

					
	Food Additives	Food Products	Beverages	Chemistry	Pharmacy
Decolorization	                                     	                              	                        	                   	             
Purification	                                      	                              	                        	                   	             
Decontamination	                                      	                              	                        	                   	             
	Amino Acids (Food & Feed) Organic Acids Caffeine Enzymes Gelatine Yeast & Extracts	Sweeteners Edible Oil Starch Hydrolysates Sugar	Wine Fruit Juice Liquid Sugar	Acids Electrolytic Baths Alcohols & Esters	Amino Acids Analgesics Antibiotics Glycerine Lactose Contrast Media Vitamins



## Calgon Carbon's Activated Carbon Activity is ISO9001 Certified

The Acticarbhone® and Anticromos® ranges meet the requirements of the ongoing monographs of the Food Chemical Codex (FCC), and the Codex œnologique (OIV).

*Certificates available upon request.*

The Acticarbhone® Pharma range meets the purity criteria mentioned on our products technical specifications sheets and the American pharmacopoeia (USP) in force.

*More information on our PHARMA brochure.*

The activated carbons featured in this brochure are technological ancillary products and cannot be considered as food ingredients under any circumstances.

## Five Reasons for Choosing It

- 1** **Made from vegetal and renewable raw material:** Consistency of performance for optimization and easy conduction of your processes.
- 2** **Efficient:** very high adsorption capability conducive to a high level of decolorization, decontamination, purification and process optimization.
- 3** **Pure:** To meet the requirements of our customers.
- 4** **Reliable:** Consistent quality thanks to a tested and tried manufacturing process and a certified quality system.
- 5** **Varied:** A wide range of products enabling treatment of liquids having varied and changing characteristics.

## Go With The World Leader In Activated Carbon Technology

As the activated carbon industry forerunner and with ultraviolet light disinfection and oxidation expertise, Calgon Carbon has originated cutting-edge purification systems for drinking water, wastewater, odor control, pollution abatement, and a variety of industrial and commercial manufacturing processes. We currently offer carbon technologies used in over 700 distinct market applications from purifying air and drinking water, to purifying foods and pharmaceuticals, to separating gas and removing mercury emissions from coal-fired power plants. Calgon Carbon's cost-effective, environmental remediation/recycle programs combine the proper mix of an effective activated carbon, ingenious adsorption systems and professional field/technical services.

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