

PURIFY | PROTECT | ENHANCE

Process Purification

Purification.  
Decolorization.  
Solutions.

Providing activated carbon for over 88 years.

 ingevity



# Global supplier. Quality products.

## **Relax—we provide high quality products at your service**

Industries worldwide depend on the quality of Ingevity's Nuchar®, a chemically activated, wood-based carbon. Nuchar carbon products are key components in: food product processing; wine, juice and sweetener decolorization; point-of-use water filters; and chemical and pharmaceutical processing.

Nuchar carbon is produced from sawdust, a natural renewable resource. Because of its porous structure, purity, and renewable nature, wood is a superior carbon source. The chemical activation of wood makes specific manipulation of its pore structure possible. As the leading global producer of wood-based activated carbon, we are fully committed to the development of this technology by optimizing carbon performance and providing cost-effective solutions. Our commitment to manufacture high quality carbon is represented by our ISO 9002, QS 9000 and Responsible Care® Certifications—internationally recognized measures of consistent superior performance and responsibility to health and safety.



### Thinking of you every step of the way

By choosing to partner with us you are choosing the highest quality activated carbon on the market. Our ISO 9002 certification and QS 9000 programs ensure our products meet the industry's highest standards. Our packaging is clean, simple, and specifically designed to prevent carbon leaks. Our high quality products will arrive in our innovative packaging when you need them. Certain grades of Ingevity activated carbon are available in bulk pressure differential trailers for large scale use. Multiwall bags and bulk bags are shipped globally.

### Our technical group is here to help

Based out of North Charleston, S.C. with a second technical center in Shanghai, China, our capabilities include performance testing per industry standards and meeting your specific methods for properties such as: adsorption capacity, porosity, strength, composition, particle size, pilot testing for scale up, field testing, and carbon handling and safety.

### Multiple plants with reliable supply



#### North America

Covington, VA  
Wickliffe, KY

#### Asia

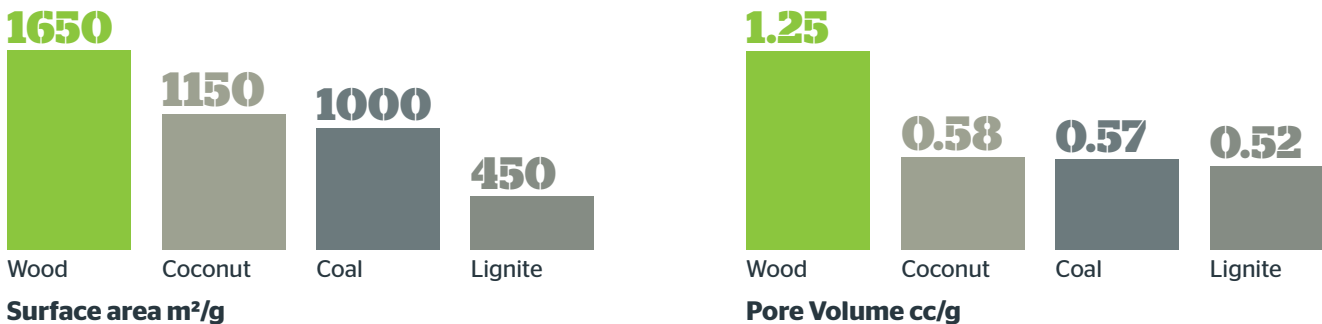
Wujiang, China  
Zhuhai, China

### Meeting your future needs

The work of our engineers and technical support staff is closely linked with the work of our carbon research group based in Charleston, S.C. The ongoing success of this combined effort is demonstrated by the consistent improvement of the performance of our products. Studies of activation chemistry, carbon porosity, shaped carbon and the effects of particle geometry have led to new directions in enhanced activated carbon products.

### More surface area—more pore volume

Nuchar—chemically activated, wood-based carbon—delivers higher surface area and pore volume per gram than carbon from other raw materials. The graphs below show chemically activated wood-based carbon having two times the pore volume than carbon created from coconut, coal, and lignite. This higher pore volume and surface area means your product will have higher purity in a shorter amount of time while using less carbon.



### At a glance

Our variety of chemically activated wood-based carbon grades are well suited to many different purification applications. The table below is a guide to just a few applications where Nuchar activated carbon properties and consistent quality have been proven.

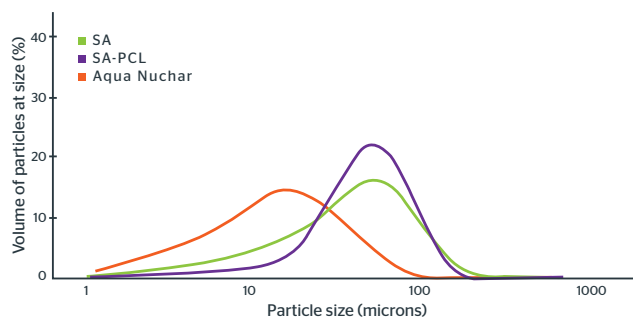
Application	Nuchar® SA-20	Nuchar SN-20	Nuchar SA PCL	Nuchar RGC Powder	Nuchar SA-T	AquaNuchar®	Nuchar WV-B 30 Granular	AquaGuard®
Corn syrup, sweeteners, sugar	■	■	■		■			
Hydrolyzed vegetable protein	■	■						
Acids (citric, phosphoric)	■							
Monosodium glutamate (MSG)	■						■	
Fermentation broths, enzymes	■	■					■	
Wine	■							
Juice	■							
Malternative base, beer	■							
Pharmaceuticals				■				■
Synthetic lubricants				■				
Alum	■	■						
Trona/soda ash	■				■			
Municipal drinking water	■					■	■	
Point-of-use water								■
Wastewater	■				■			
Soil remediation					■			



### Powdered activated carbon

- ideal for the decolorization of liquid sweeteners and purification of food ingredients
- used in pharmaceutical and chemical purification as both an adsorbent and a catalyst support
- tailored particle size allows you to achieve the optimal balance between filtration requirements and adsorption kinetics

### Particle size distribution



### Granular activated carbon

- ideal for high-efficiency purification of liquids, gases and vapors including gasoline vapor recovery systems and air purification applications
- potable water treatment uses wood-based granular carbon in gravity filters
- high hardness and low water soluble versions are available
- AquaGuard catalytic carbons have superior capacity for removing chloramine and chlorine in point of use water filters

### Your product with higher purity

Ingevity's Nuchar activated carbons—made from wood and naturally pure—are desirable in the treatment of liquid food ingredients, pharmaceuticals, beverages, nutraceuticals, and fine chemicals. Our carbons have low levels of critical metals such as arsenic, antimony, lead, and iron compared to many other types of activated carbons. Our food grade and drinking water carbons meet the stringent food grade quality requirements of activated carbons as defined in the current edition of the *Food Chemicals Codex* and are certified to NSF/ANSI Standard 61.



## Process Purification

### Technical Center

5255 Virginia Avenue  
North Charleston, SC 29406  
800 284 1724

### Customer Service

North America  
800 284 1724

Asia  
86 21 61959666

Europe  
32 2 771 2017

### Shipping Locations

Antwerp, Belgium  
Shanghai, China  
Tianjin, China  
Nagoya, Japan  
Kyushum Japan  
Fresno, CA, USA  
Wickliffe, KY, USA  
Charleston, SC, USA  
Dayton, TN, USA  
Memphis, TN, USA  
Covington, VA, USA

Certain grades of Ingevity activated carbon are available in bulk pressure differential trailers for large scale use. Multiwall bags and bulk bags are shipped globally.