

# FILTRASORB® 100

## Granular Activated Carbon

### Description

FILTRASORB 100 is a granular activated carbon developed by Calgon Carbon Corporation for the removal of taste and odor compounds, disinfection by-products, low level volatile organic compounds, and other targeted compounds from water and wastewater.

This activated carbon is manufactured by steam activation of select grades of bituminous coal which have been pulverized then reagglomerated. The combination of coal type, agglomeration and carefully controlled high-temperature activation ensures a durable activated carbon product with a wide range of pore sizes for effective adsorption. The product is also designed to comply with all the applicable provisions of the AWWA B604 Standard for Granular Activated Carbon, the stringent extractable requirements of ANSI/NSF Standard 61, and the Food Chemicals Codex.

### Features

- Calgon Carbon's agglomerated coal-based granular activated carbons have several properties which provide superior performance in a wide range of applications.
- Produced from a pulverized blend of high quality bituminous coals resulting in a consistent high quality product.
- The activated carbon granules are uniformly activated through the whole granule, not just the outside. This results in excellent adsorption properties and constant adsorption kinetics in a wide range of applications.
- The agglomerated structure ensures proper wetting while also eliminating floating material.
- High mechanical strength relative to other raw materials, thereby reducing the generation of fines during backwashing and hydraulic transport.
- Carbon bed segregation is retained after repeated backwashing, ensuring the adsorption profile remains unchanged and therefore maximizing the bed life.
- Reagglomerated with a high abrasion resistance provides excellent reactivation performance.
- High density carbon resulting in a greater adsorption capacity per unit volume.

### Specifications<sup>1</sup>

### FILTRASORB 100

Iodine Number	850 mg/g (min)
Moisture Content	2% (max) wt %
Effective Size	0.8 - 1.0 mm
Uniformity Coefficient	2.1 (max)
Abrasion Number	75 (min)
Screen Size Distribution, US Sieve Series	
On 8 mesh	15% (max) wt %
Through 30 mesh	4% (max) wt %

<sup>1</sup>Calgon Carbon test method

### Typical Properties

### FILTRASORB 100

Apparent Density	0.58 g/cc
Ash Content	8% wt %
Water Soluble Ash	<1% wt %
Non-Wettable	<1% wt %

### Thermal Reactivation and Recycle

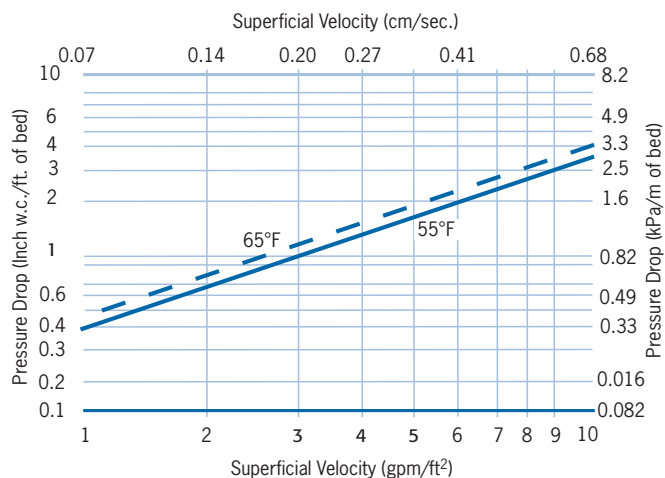
When FILTRASORB 100 granular activated carbon becomes saturated or the treatment objective for the carbon has been reached, it can be returned to a Calgon Carbon facility for reactivation and re-use. Reactivation is a high-temperature, controlled thermal process during which the adsorbed organics are destroyed and adsorptive capacity is restored. As a result of the reactivation process, the activated carbon can be safely and cost-effectively recycled for re-use. FILTRASORB 100 is an ideal carbon for reactivating and recycle with minimal losses due to its homogeneous porosity and high abrasion resistance / high mechanical strength.

Reactivation provides multiple benefits to the user, including

- a reliable supply of carbon at lower cost
- reduced CO<sub>2</sub> footprint as compared to virgin carbon
- elimination of the expense and potential long-term liability associated with alternate disposal
- waste minimization and conservation of natural materials.

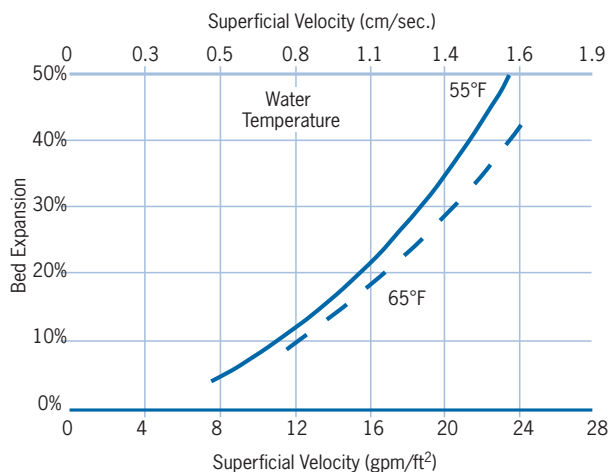
## Typical Pressure Drop

Based on Backwashed and Segregated Bed



## Typical Bed Expansion

Based on Backwashed and Segregated Bed



## Applications

FILTRASORB 100 activated carbon is used to treat surface and groundwater sources. FILTRASORB 100 functions as a dual purpose media providing both filtration and adsorption. This carbon is used as a complete replacement for sand and anthracite media. FILTRASORB has been used successfully in many water treatment applications for over 40 years.

## Design Considerations

As a replacement for existing filter media, conversion to FILTRASORB 100 granular activated carbon imposes no major change to a plant's normal filtration operations for potable water. If more contact time is required, the height of the backwash troughs can be increased. Calgon Carbon Corporation can also provide complete modular adsorption systems as an add-on treatment stage if required.

## Packaging

55 lb. (25 kg) poly bag  
1,000 lb. (454 kg) super sack  
Bulk truck

## Safety Message

Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate sampling and work procedures for potentially low oxygen spaces should be followed, including all applicable Federal and State requirements.



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