

SGL 8X30

GRANULAR ACTIVATED CARBON

Description

SGL 8x30 is a granular activated carbon designed to efficiently purify and/or decolorize many aqueous and organic liquids. Its particle size of 8x30 mesh has been selected to give optimum adsorption characteristics and low resistance to flow with liquids of high viscosity.

SGL carbon is made from selected grades of bituminous coal combined with suitable binders to give superior hardness and long life. Produced under rigidly controlled conditions by high temperature steam activation, SGL is a high density carbon with large pore volume and moderately high surface area. Its pore structure has been carefully designed for the adsorption of both high and low molecular weight impurities from solutions.

Specifications

U.S. Sieve Series	8x30
Larger than 8 mesh (weight %)	15 max.
Smaller than 30 mesh (weight %)	4 max.
Mean Particle Diameter, mm	1.5-1.7
Iodine Number, mg/g	900 min.
Molasses Number	200 min.
Moisture, % as packed	2 max.
Abrasion Number	75 min.
Ash, % by weight	10 max.

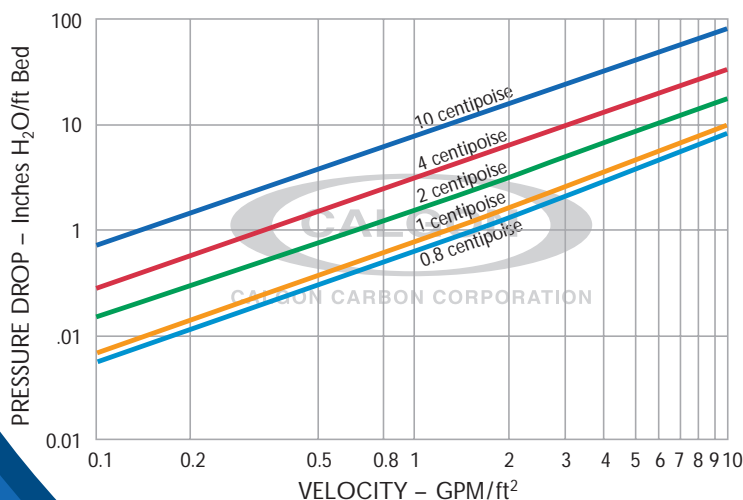
Typical Applications. The advantages and economies of using SGL carbon have found wide acceptance in the chemical and food process industries for the decolorization and purification of numerous aqueous and organic liquids. Typical of these are the purification of glycols, soda ash and caustic liquors, sugar solutions, pharmaceuticals, and plasticizers.

Economy of Column Operation. The use of highly active Calgon Carbon Corporation granular carbons in fixed or pulse bed systems provides the ultimate in countercurrent efficiency and simplicity of operation. The columns eliminate the need for slurry tanks, filter presses, and multiple treatment which is necessary with powdered carbon. A properly designed system offers these benefits when compared to powdered carbon:

- A clean, continuous operation.
- Efficient utilization of the activated carbon
 - more impurities adsorbed per pound of carbon.
- Less equipment - less floor space.
- Lower carbon dosage - lower costs.
- Improved product quality - better colors - higher purity.

Reactivation

In those applications where the volume of carbon in service is large, further savings can be realized through the reactivation of SGL for continued use in repeated cycles. Partial reactivation can sometimes be accomplished by chemical treatment without removing the carbon from the columns. In other cases, it is more satisfactory to use high temperature processing equipment such as the Herreshoff multiple-hearth furnace or direct-fired rotary kilns.



Pressure Drop Curve

The pressure drop per foot of bed depth for SGL carbon for varying flow rates at different viscosity levels is illustrated. This data was obtained in down-flow column operation with a normal packing arrangement in which the carbon was pre-soaked in hot liquid and charged to the column as a slurry. The bulk density of the charged carbon was calculated to be approximately 30 lb/ft³.

PACKAGING

55 pound (25 kg) net weight
1,000 pound net weight, Super Sacks

Carbon and Process Media

Visit our website at www.calgoncarbon.com, or call 800-422-7266 to learn more about our complete range of products and services, and obtain local contact information.

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Pore Structure

The pore structure of SGL carbon is illustrated below, where cumulative pore volume is plotted against pore diameter. Correlation studies have shown that adsorption capacity is determined in part by total pore volume and pore size distribution. Color bodies and high molecular weight organic impurities require pores within the 20 to 500 Angstrom Unit range, while odors and low molecular weight impurities require pores smaller than 20 Angstrom Units. SGL carbon has a high percentage of its total pore volume in both of these important ranges which contributes to its superior performance characteristics.

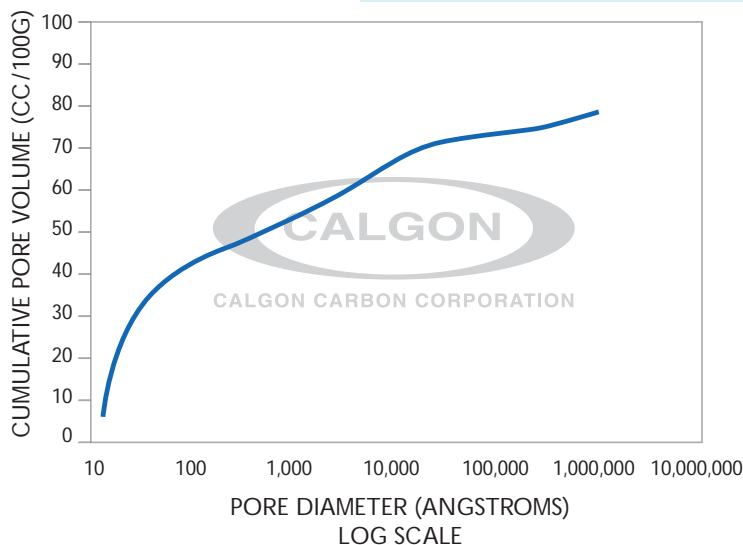
In addition, each granule of SGL is completely permeated by a system of large macro-pores which serve as avenues for the rapid diffusion of adsorbed material to the internal pore surfaces. This enhances both adsorption and reactivation characteristics.

Features

- Bituminous-based raw material
- High density
- Coal is pulverized and re-agglomerated with suitable binder

Benefits

- Provides higher hardness relative to other raw materials reducing the generation of fines and product losses during backwashing.
- Pore structure provides a wider range of contaminant removal capabilities relative to other starting materials.
- The carbon wets readily and does not float, thus minimizing loss during backwash operations.
- Creates optimal transport paths for faster adsorption.
- Generates the hardness and abrasion resistance required for thermal reactivation and minimizing generation of fines in operations requiring backwashing.



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.

Visit our website at www.calgoncarbon.com



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