

# 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.

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

- 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.
- Optimal transport paths for faster adsorption.
- Hardness and abrasion resistance required for thermal reactivation and minimizing generation of fines in operations requiring backwashing.

### 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.

### Specifications

### SGL 8x30

Molasses Number	200 (min)
Iodine Number, mg/g	900 (min)
Moisture (As Packaged), wt%	2 (max)
Abrasion Number	75 (min)
Mean Particle Diameter, mm	1.5– 1.7
8 US Mesh [2.36mm], wt%	15 (max)
< 30 US Mesh [0.600] (PAN), wt%	4 (max)

### 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.

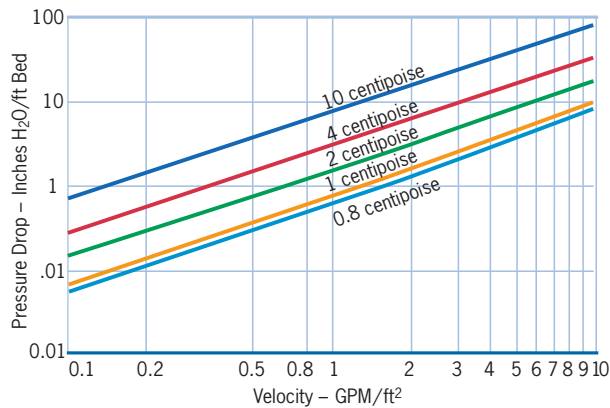
### Design Considerations

The flowrate and contact time needed to achieve the desired contaminant removal, liquid viscosity, and temperature are considerations in designing an efficient and cost-effective activated carbon system. To determine what is best for your application and assistance with the design, please contact Calgon Carbon Corporation by calling 1-800-4-CARBON.

### Reactivation

Once granular activated carbon is saturated or the treatment objective is reached, it can be recycled by thermal reactivation for reuse. Reactivation involves treating the spent carbon in a high temperature reactivation furnace or kiln. During this treatment process, the undesirable organic compounds on the carbon are thermally destroyed. Recycling by thermal reactivation is a highly technical process to ensure that spent carbon is returned to a reusable quality.

## Typical Pressure Drop



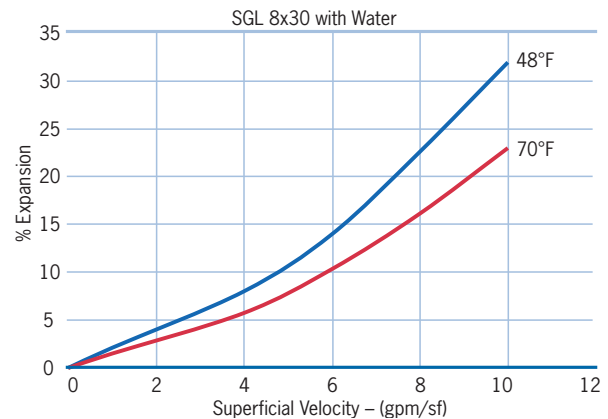
## Pressure Drop Curve

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/ft<sup>3</sup>.

## Packaging

Please contact Calgon Carbon for options and availability.

## Bed Expansion During Backwash



## 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. Please refer to the MSDS for all up to date product safety information.

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