

CAL[®] 12x40

Granular Activated Carbon

Description

Calgon Carbon's CAL is a granular, decolorizing carbon designed for efficient use in fixed or moving beds for the purification and decolorization of many aqueous and organic liquids. The particle size of 12x40 mesh has been selected to give a high rate of adsorption and low resistance to flow with liquids of low to medium viscosity.

CAL carbon is made from select 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, this carbon provides high surface area, large pore volume, high density and a pore structure optimal for the adsorption of color bodies and odor molecules from solutions. This product complies with ANSI/AWWA B604 (2005) and Food Chemical Codex (FCC) (8th Edition) published by the U. S. Pharmacopeia.

Features

- Reagglomerated metallurgical grade bituminous coal
- Pulverized coal is reagglomerated using suitable binders
- High density
- Uniformly activated granules
- High pore volume

Benefits

- Reagglomeration creates optimal transport pores for faster adsorption
- High mechanical strength and uniform transport pore distribution, resulting in excellent reactivation performance, low attrition loss during handling and minimizing generation of fines in operations requiring backwash.
- Pore structure provides a wide range of contaminant removal.
- The carbon wets readily and does not float thus minimizing loss during backwash operation.

Applications

The advantages and economy of CAL systems have found wide acceptance in the chemical process industries for the decolorization and purification of numerous aqueous and organic liquids. Typical of these are glycerin, urea, monosodium glutamate, organic esters, soda ash, caustic liquors and muriatic acid. It can also be used for some sugar applications.

Specifications

CAL 12x40

Mean Particle Diameter, mm	0.9 - 1.1
Iodine Number, mg/g	1,000 (min)
Molasses Number	230 (min)
Moisture (As Packaged), wt%	2 (max)
Abrasion Number	75 (min)
12 US Mesh [1.70mm], wt%	5.0 (max)
<40 US Mesh [0.425mm] (PAN), wt%	4 (max)

Design Considerations

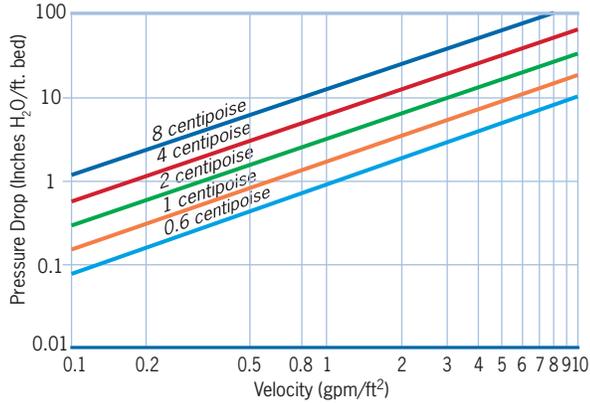
The flowrate, contact time needed to achieve the desired contaminant removal, liquid viscosity and temperature are all considerations in designing an efficient and cost effective activated carbon system. The pressure drop per ft. of bed depth for CAL 12 x 40 carbon is shown for different liquid viscosities. 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

Downflow pressure drop through a bed of CAL 12x40



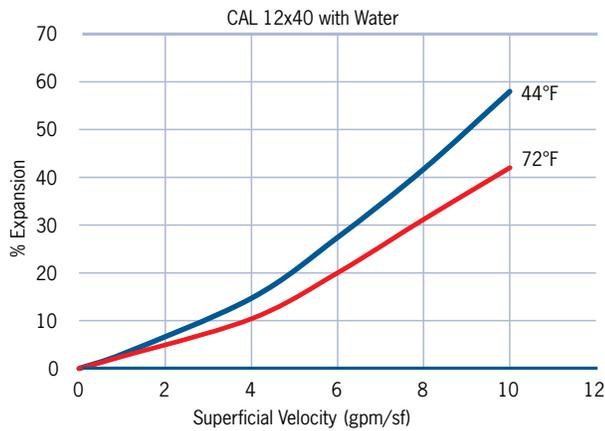
Packaging

Please contact Calgon Carbon for options and availability.

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.

Typical Bed Expansion



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