

CAL[®] 12x40

Granular Activated Carbon

Applications



Food & Beverage



GLYCERINE
Glycerine



Corn
Sweetener



Edible Oils



Sweeteners



Industrial
Processes

The advantages and economy of CAL systems are widely accepted 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.

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 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 / Benefits

- Reagglomerated metallurgical grade bituminous coal
- Uniformly activated granules
- High pore volume
- 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 wider range of contaminant removal
- The carbon wets readily and does not float thus minimizing loss during backwash operation

Specifications

CAL 12x40

Mean Particle Diameter, mm	0.9–1.1
Iodine Number, mg/g	1000 (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%	4.0 (max)

Safety Message

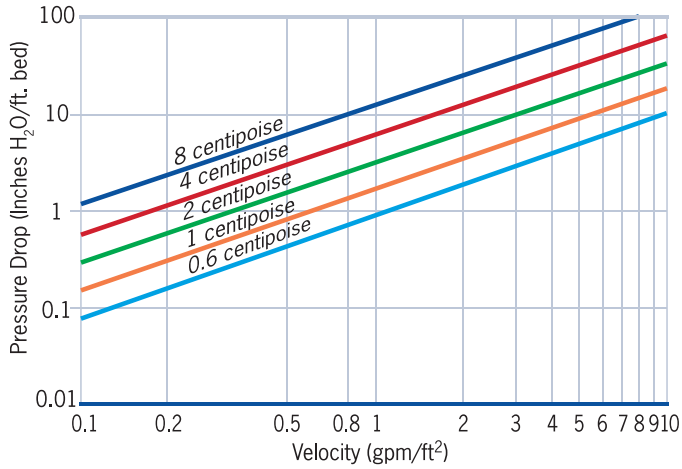
Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

1.800.4CARBON calgoncarbon.com

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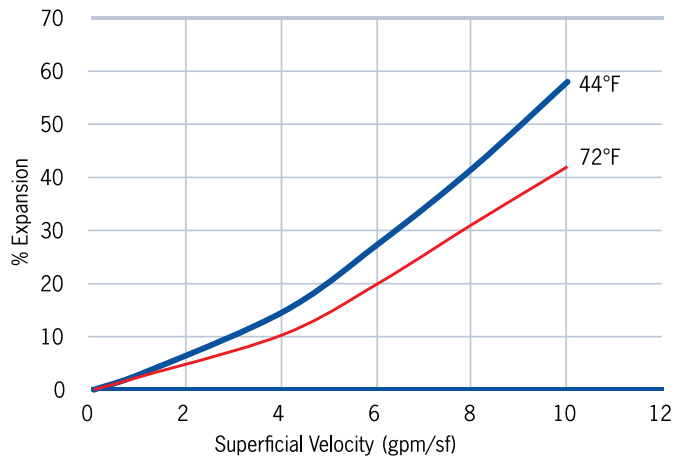
Typical Pressure Drop

Downflow pressure drop through a bed of CAL 12x40



Typical Bed Expansion

Bed Expansion During Backwash of CAL 12x40 with Water



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.

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