

CAL[®]-I 12x40

Granular Activated Carbon

Applications



Food & Beverage



GLYCERINE
Glycerine



Corn
Sweetener



Edible Oils



Sweeteners

The high adsorption capacity of CAL-I is advantageous in decolorizing applications and where other specific organic removal is needed in addition to color removal. The exhausted carbon can be thermally reactivated for repeated use by the customer.

Description

Calgon Carbon's CAL-I is a high activity 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 has been selected to give a high rate of adsorption and low resistance to flow with liquids of low to medium viscosity. CAL-I 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 the requirements for activated carbon as defined by the Food Chemicals Codex (FCC) (8th Edition) published by the U.S. Pharmacopeia.

Features / Benefits

- Reagglomerated metallurgical grade bituminous coal
- Uniformly activated granules
- High pore volume
- Dedusted product
- Reagglomeration creates optimal transport pores for faster adsorption
- Hardness and abrasion resistance required for thermal reactivation and minimizing generation of fines in operations requiring backwashing
- Pore structure provides a wider range of contaminant removal capabilities relative to other starting material
- The carbon wets readily and does not float thus minimizing loss during backwash operation

Specifications

CAL-I 12x40

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Mean Particle Diameter, mm	0.9–1.10
Iodine Number, mg/g	1050 (min)
Molasses Number	250 (min)
Moisture (As Packaged), wt%	2 (max)
Abrasion Number	75 (min)
Density (Apparent), g/cc	0.440–0.540
12 US Mesh [1.70mm], wt%	5.0 (max)
< 40 US Mesh [0.425mm] (PAN), wt%	4.0 (max)

Safety Message

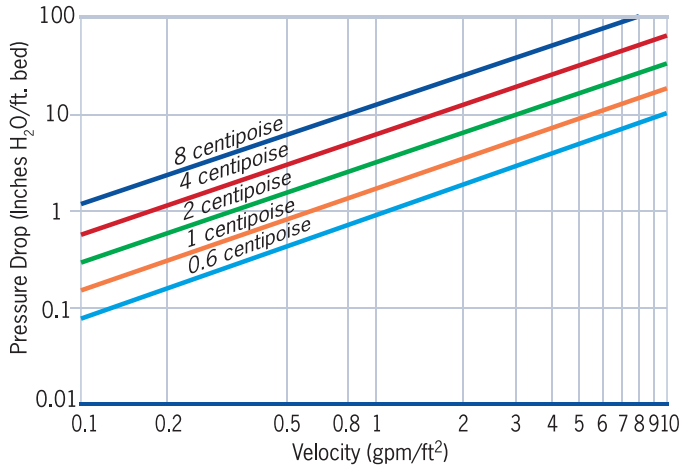
Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

1.800.4CARBON calgoncarbon.com

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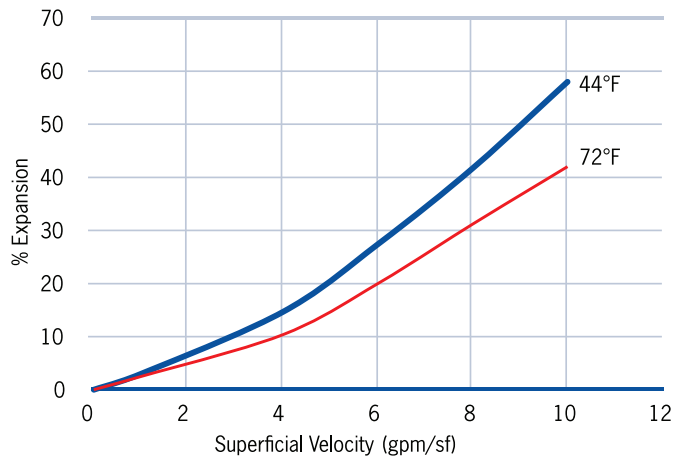
Typical Pressure Drop

Downflow pressure drop through a bed of CAL-I 12x40



Typical Bed Expansion

Bed Expansion During Backwash of CAL-I 12x40 with Water



Design Considerations

The flowrate and 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-I 12x40 carbon is shown for different liquid viscosities.

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