

## PRODUCT BULLETIN

# CPG<sup>®</sup> LF 12x40

## Acid Washed Granular Activated Carbon

### Description

CPG LF is an acid washed granular activated carbon with a low acid soluble iron content that is designed for the purification and decolorization of many aqueous and organic liquids. It can be used efficiently in either fixed or moving beds. The particle size has been selected to give a high rate of adsorption and low resistance to flow with liquors of medium viscosity. CPG LF is produced with low fines or dust.

CPG LF 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 solution.

### Features

- Reagglomerated metallurgical grade bituminous coal
- Acid washed for highest purity
- Low fines
- Faster adsorption
- High density

### 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 backwashing.
- A strongly adsorbing pore structure optimal for the adsorption of organics, color bodies and odor molecules.
- Acid washed to prevent ash leaching in acidic solutions.
- Cleaner, more efficient operation than using powdered carbons.
- Improves product quality.
- Reduced iron and ash levels.

### Applications

One use of CPG LF is in solutions of low pH such as corn syrup. Since the carbon has been acid washed, the constituents of CPG LF will not be leached into the acidic solution. Furthermore, the high adsorption capacity of CPG LF in fixed or moving beds permits continuous decolorizing cycles, after which the carbon can be thermally regenerated for repeated use. The advantages and economic benefit of CPG LF are also evident when it is used in the purification of acid solutions such as muriatic and adipic or low pH aqueous streams.

### Specifications

### CPG LF 12x40

Iodine Number, mg/g	950 (min)
Molasses Number	210 (min)
Moisture (As Packaged), wt%	3 (max)
Abrasion Number	78 (min)
Mean Particle Diameter, mm	1.2 -1.4
pH (Extractable)	5.0 – 8.0
Acid Soluble Iron, wt%	0.01(max)
Acid Soluble Ash, wt%	0.5 (max)
10 US Mesh [2.00mm], wt%	5.0 (max)
< 40 US Mesh [0.425mm] (PAN), wt%	0.5 (max)

### Design Considerations

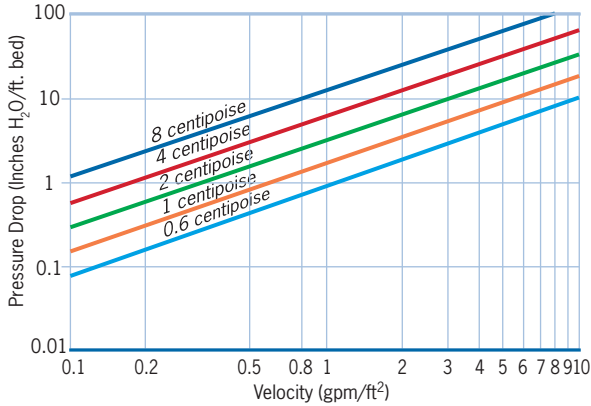
The flowrate and contact time needed to achieve the desired contaminant removal, liquid viscosity, and temperature are all considerations in designing an efficient and cost-effective activated carbon system. The pressure drop per ft. of bed depth for CPG LF12x40 carbon is shown for different liquid viscosities. 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.

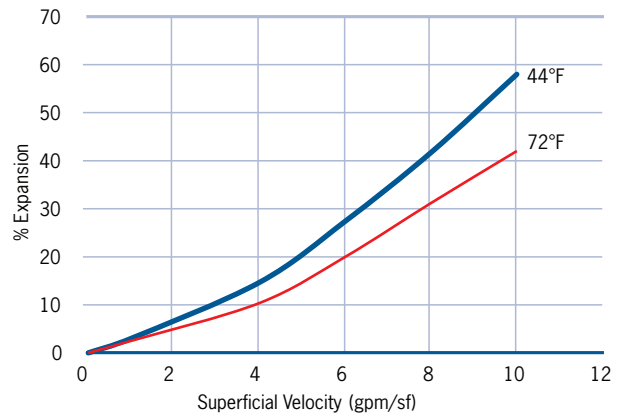
### Typical Pressure Drop

Downflow pressure drop through a bed of CPG LF 12X40



### Typical Bed Expansion

Bed Expansion During Backwash of CPG LF 12X40 with Water



### 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.

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Your local representative