

## **Adsorbent Media Cartridges – Fuller’s Earth and Activated Alumina**

**Field proven in corrosive vacuum  
pump oil applications**

### **DESCRIPTION**

Velcon adsorbent media cartridges combine the highest grade sorbing materials with specially selected structural components. Field proven at major semiconductor companies, these cartridges maintain oil quality in the most corrosive environments.

Models **LA-61801B** and **LA-71801B** contain a special grade of fuller’s earth mined in Florida and Georgia. This clay is heat refined to increase sorbing capacity and water resistance.

Models **LB-71801** and **LB-1107B** contain a granular form of activated alumina that has proven most effective for oil purification.

### **APPLICATIONS**

Adsorbent media cartridges remove acids, gums, surfactants, varnishes, soaps, color bodies, corrosive gases, polar compounds and oxidation products from hydrocarbon and synthetic oils. They also remove moisture and filter particulates to a nominal 10 micrometer level. Routine filtering will return oil to a clear and bright condition, extending oil life and protecting machinery.

Filtering mechanical **vacuum pump oil** with adsorbent cartridges is a standard process in the semiconductor industry for LPCVD, Ion Implantation and Plasma Etching equipment.



Velcon Adsorbent Media cartridges effectively process:

Insulating Oil  
Quench Oil  
Mineral Oil  
Heat Transfer Fluids  
Transformer Oil

Vacuum Pump Oils  
Hydrocarbon base  
Perfluoropolyethers  
Phosphate Ester Oils  
Synthetic Oils

## CONSTRUCTION

Model Number	Adsorbent Media	Media Mesh	Media Quantity	Dimensions
LA-61801B	Fuller's Earth	50 - 80	10 lbs.	2 <sup>9</sup> / <sub>16</sub> " I.D. x 6 <sup>1</sup> / <sub>4</sub> " O.D. x 18" length
LA-71801B	Fuller's Earth	50 - 80	13 lbs.	2 <sup>9</sup> / <sub>16</sub> " I.D. x 7" O.D. x 18" length
LB-71801	Activated Alumina	48 - 100	15 lbs.	2 <sup>9</sup> / <sub>16</sub> " I.D. x 7" O.D. x 18" length
LB-1107B	Activated Alumina	48 - 100	14 lbs.	2" I.D. x 11" O.D. x 7 <sup>1</sup> / <sub>4</sub> " length

Buna-N gaskets bonded to end caps

Phosphate coated heavy gauge steel centertube and end caps

Internal migration barrier

Phenolic resin impregnated polyester/rayon outer jacket

100 psi collapse strength

300°F maximum operating temperature

## APPLICATION NOTES

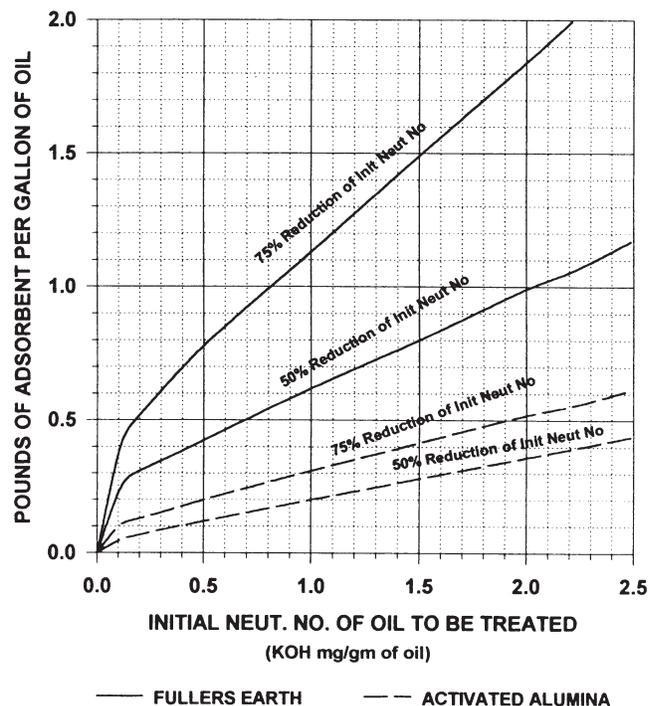
- Flow rates should be kept below 1 gpm per cartridge for optimum performance. Initial pressure drop is typically below 5 psi. Changeout differential pressure is 25 psi.
- If water or solid contamination is heavy a prefilter should be installed. FO-718PL Cartridges remove solids and AC-718 **Aquacon**® Cartridges remove solids, water and hydrolyzed acids.
- Activated alumina has a higher specific surface area than fuller's earth. It is also more efficient at removing Lewis acids and halogens, and has higher water resistance. It typically has 3 to 5 times the acid adsorbing capacity of fuller's earth.
- An LB-71801 activated alumina cartridge will adsorb up to 2350 ml of reagent grade HCl.
- Easy-to-use field test kits are available to determine when the acid level in oil is above acceptable limits. We recommend using these kits to determine when cartridges should be changed and also to compare the cost effectiveness of activated alumina vs. fuller's earth in a given application.

## ORDERING INFORMATION

LB-1107B      LA-61801B      LB-71801

LA-1107B      LA-71801B

Specify model number as shown above. LA-71801B, LB-71801 and LB-1107B are packaged two per carton. LA-61801B is packaged four per carton.



Approximate quantities of adsorbent material required for desired reduction in neutralization number of oil when using batch method of reclamation.



Velcon products are sold and serviced by a world-wide representative network. To order, contact Headquarters or your LOCAL REPRESENTATIVE:

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