



# LC801

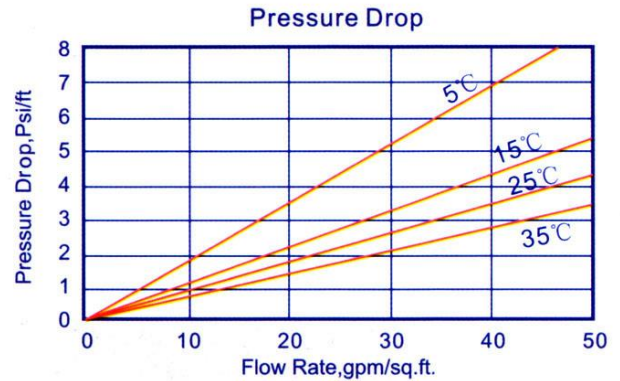
## STRONG ACID CATION EXCHANGE RESIN

**IOL LC801** is a high purity, high capacity, gel type sulphonate polystyrene cation exchange resin supplied in the sodium form as moist, tough, uniform spherical beads. **IOL LC801** is intended for use in all water softening, deionization and preparation of pure water. **IOL LC801** is in compliance with the U.S. Food and Drugs Code of Federal Regulations section 21 paragraph 173.25

### PHYSICAL & CHEMICAL PROPERTIES

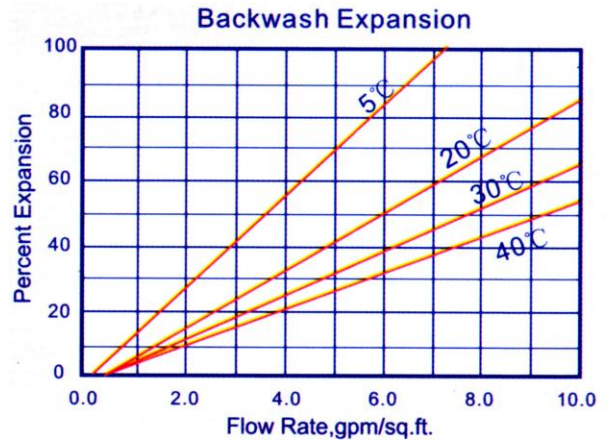
Appearance	Palm yellow spherical beads
Polymer Matrix Structure	Styrene - DVB
Type	Gel strong acid
Functional Group	$R-(SO_3)^-M^+$
Ionic Form	$Na^+$
Moisture Content	45 - 50 %
Capacity in Volume	$\geq 2.0$ meq/ml min
Shipping Weight	0.77- 0.87 g/ml
Density	1.25- 1.29 g/ml
Particle Size Range ( 0.315 - 1.250 mm)	$\geq 95$ %
Effective Particle Size Range	0.40 - 0.60 mm
Uniformity Coefficient	$\leq 1.60$
Swelling ( $Na^+ \rightarrow H^+$ )	$\leq 10$ %
Sphericity	$\geq 90$ %
Screen Size Range	0.315mm to 1.25mm; 50-16 mesh

### HYDRAULIC PROPERTIES



### PRESSURE DROP

The graph shows the expected pressure loss per foot of bed depth as a function of flow rate, at various temperatures.



\* 1 m/h equals 0.41 gpm/sq.ft

### BACKWASH

After each cycle the resin bed should be backwashed at a rate that expands the bed 25 to 50 percent. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of **IOL LC801** in the sodium form.



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### SUGGESTED OPERATING CONDITIONS

pH Range	0 - 14
Temperature	≤ 120 °C (For Na Form) ≤ 100 °C (For H Form)
Minimum Bed Depth	0.6 m
Regenerant Concentration	8 – 12 % (For NaCl) 5 % (For HCl)
Regenerant Flow Rate	4 – 5 m/h (For NaCl) 3 – 5 m/hr (For HCl)
Regenerant Contact Time	≥ 30 min
Displacement Rinse Rate	4 – 5 m/h (For NaCl) 3 – 5 m/h (For HCl)
Displacement Rinse Time	≥ 30 min
Fast Rinse Rate	15 – 30 m/h
Fast Rinse Time	10 – 30 min
Service Flow Rate	15 – 30 m/h

### APPLICATIONS

#### DEMINERALIZATION

IOL LC801 can be used in multiple and mixed bed demineralizers with strongly basic anion exchangers such as IOL LA703, LA153, LA203.

#### SOFTENING

IOL LC801 is ideally suited for industrial softening applications because of its high capacity and good physical stability.

\* For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to insure compliance with extractable levels.

### OPERATING CAPACITY

The Sodium cycle operating capacity of IOL LC801 for hardness removal at various regeneration levels with an influent calcium/magnesium ratio 2/1 and a hardness level of 500 ppm as CaCO<sub>3</sub> is shown in the following table:

Gram NaCl/ltr	Capacity meq/ml
80	0.92
120	1.16
160	1.33
240	1.51

The following table shows the hydrogen cycle relationship between operating capacity and regeneration level when using sulfuric acid as the regeneration:

Gram H <sub>2</sub> SO <sub>4</sub> /ltr	Capacity meq/ml	
	500 ppm as CaCO <sub>3</sub> NaCl	500 ppm as CaCO <sub>3</sub> CaCl <sub>2</sub>
80	0.87	0.53
120	1.05	0.59
160	1.16	0.62
240	1.29	0.66
320	1.36	0.69

### PACKING

PE lined with plastic bag. Net weight: 25 litres (21 kg.) / Bag

**\* CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

**Material Safety Data Sheets (MSDS)** are available for all IOL products. To obtain a copy, contact your local sales representative or our corporate headquarters. They contain important health and safety information. That information may be needed to protect your employees and customers from any know health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further we assume no liability for the consequences of any such actions.