

## Lewatit® CNP 80 WS

**Lewatit CNP 80 WS** is a weakly acidic, macroporous, acrylic-based cation exchange resin of controlled bead size. CNP 80 WS is characterized by high total capacity, excellent chemical and mechanical stability with high resistance to osmotic shock. Optimized kinetics lead to an increased operating capacity compared to standard weak acid ion exchange resins.

### Lewatit CNP 80 WS applications\*:

dealkalization, demineralization, removal / extraction of heavy metals

### Typical physical and chemical properties\*\*

		US Units		International Units	
Ionic form as shipped			H <sup>+</sup>		H <sup>+</sup>
Bead size	> 90%	US mesh	12 - 40	mm	0.4 - 1.6
Effective Size		mm	0.53 +- 0.05	mm	0.53 +- 0.05
Shipping weight	approx.	lbs/ft <sup>3</sup>	47	g/l	750
Density				g/ml	1.19
Water retention		% weight	45 - 50	%	45 - 50
Total capacity, min.		kgr CaCO <sub>3</sub> / ft <sup>3</sup>	94.0	eq/l	4.3
Volume change	H <sup>+</sup> >> Ca <sup>++</sup>	max. %	7	max. %	7
Stability	temperature range	°F	14 - 250	°C	-10 - 120
	pH range		0 - 14		0 - 14
Storability	of product	min years	2	min. years	2
	temperature range	°F	-4 - 104	°C	-20 - 40

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Lewatit CNP 80 WS. Before working with this product, you must read and become familiar with the available information on its hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets and product labels. Consult your Sybron Chemicals Inc. representative or contact Bayer's Product Safety and Regulatory Affairs Department in Pittsburgh, PA.

\*As with any product, use of the products mentioned in this publication in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

\*\*These items are provided as general information only. They are approximate values and are not part of the product specifications.

### Contact Us:

Sybron Chemicals Inc.  
A Bayer Company  
Birmingham Road  
Birmingham, NJ 08011  
Phone: 1-800-678-0020  
Fax: 609-894-8641

[www.ionexchange.com](http://www.ionexchange.com)

### Contact Us:

Sybron Chemicals Inc.  
A Bayer Company  
100 Bayer Road  
Pittsburgh, PA 15205  
Phone: 1-800-662-2927  
Fax: 412-777-4109

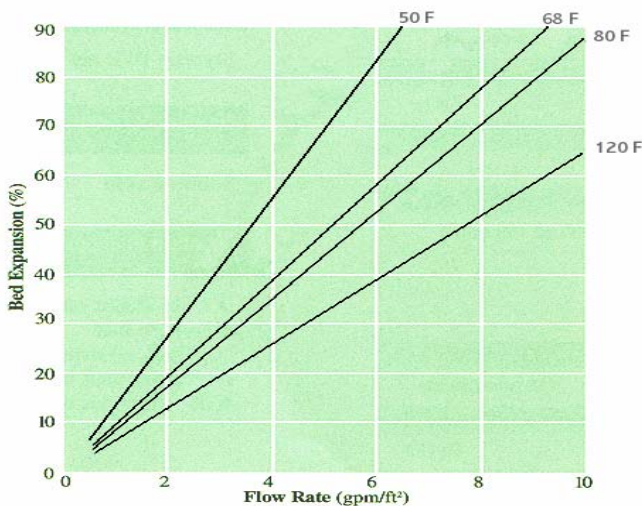
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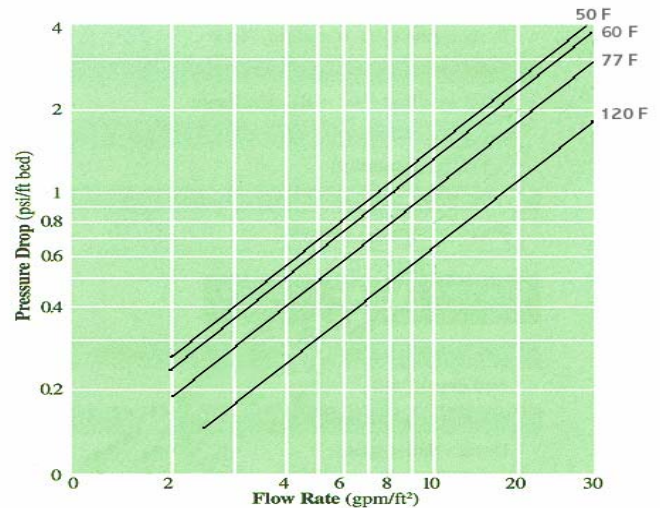
## Recommended Operating Parameters

		US Units		International Units			
Operating Temperature		max. °F	170	max. °C	75		
Operating pH-range			5 - 14		5 - 14		
Bed Depths		min. ft	2	min. mm	600		
Pressure Drop			see chart		see chart		
Max. adm. Pressure drop		psi	36	kPa	250		
Surface Flow Rate	exhaustion	gpm/ft <sup>2</sup>	2 - 20	m/h	5 - 50		
	backwash	gpm/ft <sup>2</sup>	see chart	m/h	see chart		
Bulk Flow Rate	exhaustion	gpm/ft <sup>3</sup>	1 - 5	BV/h	8 - 40		
Bed Expansion		%	see chart	%	see chart		
Freeboard	% of bed depth	%	80 - 125	%	80 - 125		
Regenerant	type		HCl	H <sub>2</sub> SO <sub>4</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	
	level	lb/ft <sup>3</sup>	4 - 5	4 - 6	g/l	64 - 80	64 - 96
	concentration	%	3 - 6	0.5 - 0.8	%	3 - 6	0.5 - 0.8
Surface Flow Rate	regeneration	gpm/ft <sup>2</sup>	2 - 8	m/h	5 - 20		
	rinsing, slow / fast	gpm/ft <sup>2</sup>	0.4 - 6 / 2 - 20	m/h	1 - 15 / 5 - 50		
Bulk Flow Rate	regeneration	gpm/ft <sup>3</sup>	0.3 - 1	BV/h	2.5 - 8	4 - 8	
	rinsing, slow / fast	gpm/ft <sup>3</sup>	0.3 - 1 / 1 - 5	BV/h	2.5 - 8 / 8 - 40		
Rinsing Water Requirement	slow / fast	gals./ft <sup>3</sup>	7 - 15 / 15 - 55	BV	1 - 2 / 2 - 7		

### Bed Expansion Curve



### Pressure Loss Curve



$$^{\circ}\text{C} = 5 / 9 ( ^{\circ}\text{F} - 32 )$$

$$\text{m} = \text{ft} * 0.3048$$

$$\text{kPa} = \text{psi} * 7.03$$

$$\text{m} / \text{hr} = \text{gpm} / \text{sq.ft.} * 2.44$$

Note: The information contained in this bulletin is current as of April 2003. Please contact Sybron Chemicals Inc. to determine whether this publication has been revised.

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