

MonoPlus

Lewatit MonoPlus™ SP 112

Lewatit MonoPlus SP 112 is a strongly acidic, macroporous-type cation exchange resin of uniform particle size (monodispersed) based on a styrene-divinylbenzene copolymer for use in oxidative and high velocity environments. The optimized kinetics lead to an increased operating capacity compared to ion exchange resins with heterodispersed bead size distribution.

MonoPlus SP 112 is also available in hydrogen form (**MonoPlus SP 112 H**).

Lewatit MonoPlus SP 112 applications*:

softening, demineralization, condensate polishing

Typical physical and chemical properties**

		US Units		International Units	
Ionic form as shipped			Na ⁺		Na ⁺
Mean bead size	> 90%	mm	0.66 +- 0.07	mm	0.66 +- 0.07
Uniformity coefficient		max.	1.1	max.	1.1
Shipping weight		lbs/ft ³	49.0	g/l	780
Density				g/l	1.24
Water retention		% weight	53 - 55	%	53 - 55
Total capacity, min.		kgr CaCO ₃ / ft ³	37	eq/l	1.7
Volume change	Na ⁺ >> H ⁺	max. %	-8	max. %	-8
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 MonoPlus SP 112. 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 form 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.

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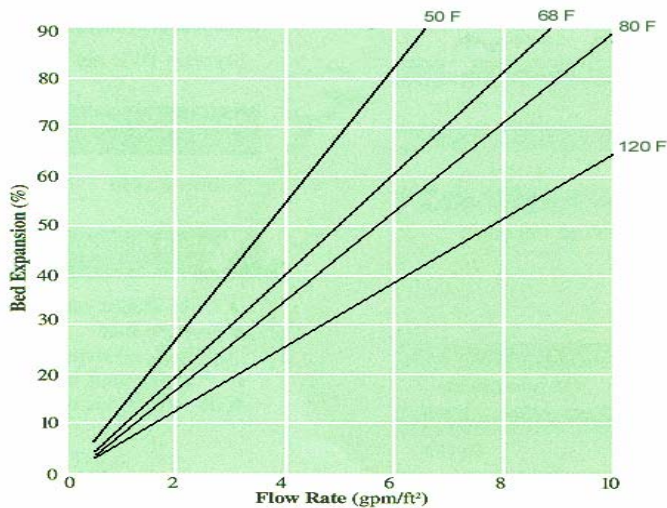
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Recommended Operating Parameters

		US Units		International Units			
Operating Temperature		max. °F	250	max. °C	120		
Operating pH-range			0 - 14		0 - 14		
Bed Depths		min. ft	2.6	min. mm	800		
Pressure Drop			see chart		see chart		
Max. adm. Pressure drop		psi	44	kPa	300		
Surface Flow Rate	exhaustion	gpm/ft ²	2 - 25	m/h	5 - 60		
	backwash	gpm/ft ²	see chart	m/h	see chart		
Bulk Flow Rate	exhaustion	gpm/ft ³	1 - 6	BV/h	8 - 48		
Bed Expansion		%	see chart	%	see chart		
Freeboard	% of bed depth	%	60 - 75	%	60 - 75		
Regenerant	type		HCl	H ₂ SO ₄	HCl	H ₂ SO ₄	
	level	lb/ft ³	2 - 10	2.5 - 10	g/l	32 - 160	40 - 160
	concentration	%	4 - 10	0.7 - 6	%	4 - 10	0.7 - 6
Surface Flow Rate	regeneration	gpm/ft ²	0.4 - 4	1 - 6	m/h	1 - 10	3 - 15
	rinsing, slow / fast	gpm/ft ²	0.4 - 6 / 2 - 25		m/h	1 - 15 / 5 - 60	
Bulk Flow Rate	regeneration	gpm/ft ³	0.3 - 1	0.5 - 4	BV/h	2.5 - 8	4 - 32
	rinsing, slow / fast	gpm/ft ³	0.3 - 4 / 1 - 6		BV/h	2.5 - 32 / 8 - 48	
Rinsing Water Requirement	slow / fast	gals./ft ³	7 - 15 / 8 - 30		BV	1 - 2 / 1 - 4	

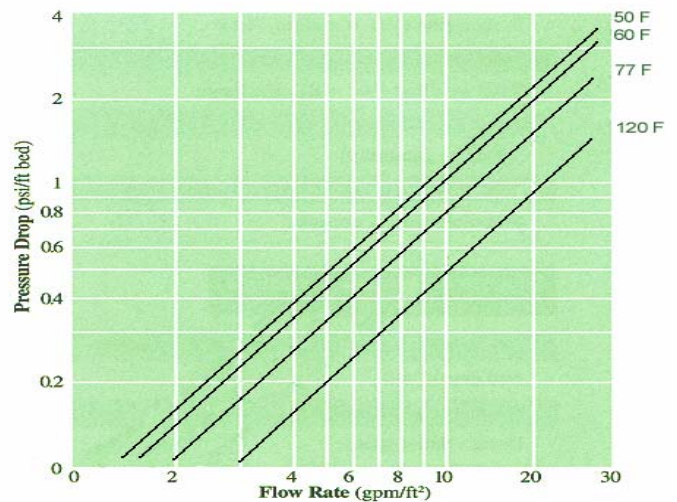
Bed Expansion Curve



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

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

Pressure Loss Curve



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

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

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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