Lewatit® SM 94

Lewatit SM 94 is a highly regenerated mixed bed ion exchange resin consisting of a 1:1 chemically equivalent mixture of a type 1, strong base anion exchange resin and a strong acid cation exchange resin. **Lewatit SM 94** is specially treated for high conversion and is ready to use without regeneration. **Lewatit SM 94** is especially suitable in mixed bed units for central polishing after demineralization plants.

Lewatit SM 94 applications*:

demineralization, mixed bed polishing; electronics, laboratory, rad waste, and process industries

Typical physical and chemical properties**		US Units		International Units	
Ionic form as shipped			H^+ / OH^-		H^+ / OH^-
Bead size	> 90%	US mesh	16 - 40	mm	0.4 - 1.3
Effective size		mm	0.54 +- 0.06	mm	0.54 +- 0.06
Shipping weight		lbs/ft³	43	g/l	690
Density				g/ml	1.13
Water retention		% weight	48 - 55	%	48 - 55
Total capacity, min.	to 20,000 Ohm-cm	kgr $CaCO_3$ / ft³	15	eq/l	0.7
Conversion		max. %	90 - 95	max. %	90 - 95
Stability	temperature range	°F	34 - 140	°C	1 - 60
	pH range		0 - 14		0 - 14
Storability	of product	min years	1	min. years	1
	temperature range	°F	14 - 104	°C	-10 - 40

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Lewatit SM 94. 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.

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Edition 04/03a

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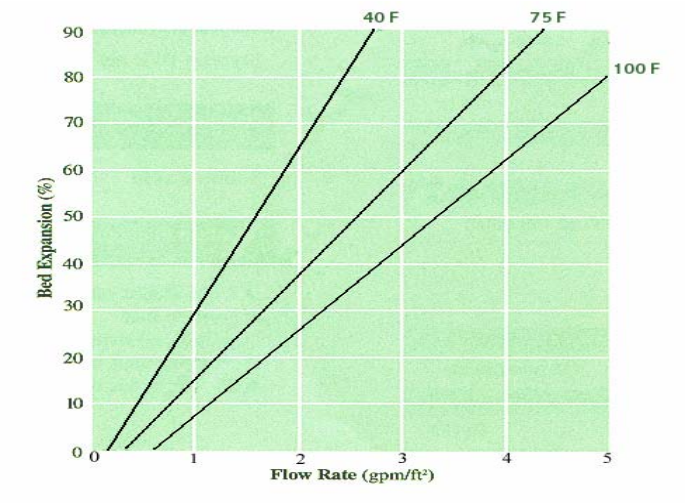
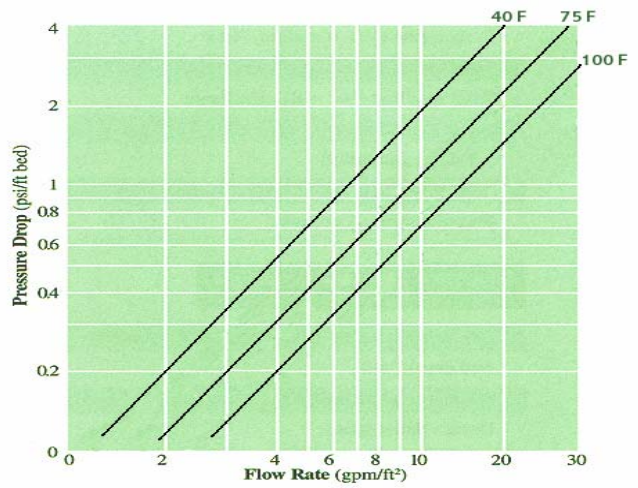
Recommended Operating Parameters		US Units			International Units		
Operating Temperature		max. °F	140		max. °C	60	
Operating pH-range			0 - 12			0 - 12	
Bed Depths		min. ft	2.0		min. mm	600	
Pressure Drop			see chart			see chart	
Max. adm. Pressure drop		psi	21		kPa	150	
Surface Flow Rate	exhaustion	gpm/ft^2	5 - 25		m/h	12 - 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	%	80 - 100		%	80 - 100	
Regenerant	type		HCl/H_2SO_4	NaOH		HCl/H_2SO_4	NaOH
	level	lb/ft^3	5 - 15		g/l	80 - 240	
	concentration	%	1 - 6	4 - 6	%	1 - 6	4 - 6
Surface Flow Rate	regeneration	gpm/ft^2	1 - 4	0.4 - 4	m/h	2 - 10	1 - 10
	rinsing, slow / fast	gpm/ft^2	1 - 4 /	5 - 15	m/h	2 - 10 /	12 - 40
Bulk Flow Rate	regeneration	gpm/ft^3	0.5 - 1	0.25 - 1	BV/h	4 - 8	2 - 8
	rinsing, slow / fast	gpm/ft^3	0.25 - 1 /	1 - 6	BV/h	2 - 8 /	8 - 48
Rinsing Water Requirement	slow / fast	$gals./ft^3$	7 - 15 /	23 - 70	BV	1 - 2 /	3 - 9

Bed Expansion Curve



Pressure Loss Curve



°C = 5 / 9 (°F - 32) m = ft * 0.3048 kPa = psi * 7.03 m / hr = gpm / 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.