



PRODUCT INFORMATION  
**LEWATIT<sup>®</sup> S 80**



**Lewatit<sup>®</sup> S 80** is a strongly acidic, gelular cation exchange resin of a standard bead size distribution based on a styrene-divinylbenzene copolymer. It's high total capacity, very good chemical and mechanical stability make it especially suitable for use in softening of industrial water.

**Lewatit<sup>®</sup> S 80** can be used in conjunction with all conventional ion exchange process. For other systems, there are special grades of this resin with a suitable bead size distribution, such as our Lewatit Monoplus grades.

The special properties of this product can only be fully utilized if the technology and process used correspondence to the current state-of-the-art. Further advice in this matter can be obtained from Lanxess Pte Ltd, Business Unit Ion Exchange Resins.

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**General Description**

Ionic form as, as shipped	Na <sup>+</sup>
Functional group	sulfonic acid
Matrix	crosslinked polystyrene
Structure	gel type beads
Appearance	brown, translucent

**Physical and Chemical Properties**

Bead size*	> 90%	mm	0.315 ~ 1.25
Effective size		mm	0.47 ± 0.06
Uniformity coefficient*		max	max. 1.7
Bulk weight	(± 5%)	g/l	850
Density		approx. g/ml	1.28
Water retention		%	42 – 48
Total capacity*		min. eq./l	2.0
Volume change Na <sup>+</sup> -> H <sup>+</sup>		max. %	10
Stability	at pH-range		0 – 14
Storability	of the product	min. years	2
Storability	at temperature	°C	-10 - 40

\*These data are specification values and are subject to continuous monitoring.

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**Recommended Operating Conditions\***

Operating temperature		max. °C	120
Operating pH range			0 – 14
Bed depth		min. mm	800
Specific pressure loss	(15°C)	approx. kPa* h/m <sup>2</sup>	1.5
Max pressure loss		Kpa	150
Linear velocity***	exhaustion	max. m/h	40
Linear velocity	backwash (20°C)	approx. m/h	14 – 18
Bed expansion	(20°C, per m/h)	approx. %	4
Freeboard	as % of resin volume	%	80 – 100
Regenerant			NaCl
Counter-current regeneration	level	approx. g/l	90
	(or WS System) concentration	approx. %	8 – 10
	Linear velocity regeneration	approx. m/h	5
	Linear velocity rinsing	approx. m/h	5
Rinse water requirement		approx. BV	5
Co-current regeneration	level	approx. g/l	200
	concentration	approx. %	8 – 20
	Linear velocity regeneration	approx. m/h	5
	Linear velocity rinsing	approx. m/h	5
Rinse water requirement		approx. BV	6

\* The recommend operating conditions refer to the use of the product under normal operating conditions. It is based on tests in pilot plants and data obtained from industrial applications. However, additional data are needed to calculate the resin volumes required for ion exchange units. These are to be found in our Technical Information Sheets.



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## **Safety Precautions**

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Strong oxidants, e.g. nitric acid, can cause violent reactions if they come into contact with ion exchange resins.

## **Toxicity**

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The safety data sheet must be observed. It contains additional data on product description, transport, storage, handling, safety and ecology.

## **Disposal**

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A proprietary technical recycling process for used ion exchanger is unknown to us. In the European Community the following possibilities for disposal can be utilized.

Resins used for water treatment and in the sugar industry can be disposed under code number 190 905. Our preference is to recommend disposal in an industrial incinerator.

Ion exchange resins which contain impurities after use in industrial processes, e.g. electroplating, chemical treatment, etc., can be disposed under code number 190 806. A certificate of disposal is required.

Lanxess Deutschland GmbH  
Ion Exchange Resins  
D-51369 Leverkusen

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