

# LEWATIT<sup>®</sup> S 1467

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## Product Information

**Lewatit S 1467** is a strongly acidic cation exchange resin with beads of uniform size (monodisperse) based on a styrene-divinylbenzene copolymer. The monodisperse beads are chemically and osmotically very stable. The optimized kinetics lead to an increased operating capacity compared to ion exchange resins with heterodisperse bead size distribution.

**Lewatit S 1467** is especially applicable for

- softening of industrial water
- softening of drinking water

**Lewatit S 1467** is adding special features to the resin bed:

- high exchange flow rates during regeneration and loading
- good utilization of the total capacity
- low rinse water demand
- homogeneous throughput of regenerants, water and solutions; therefore a homogeneous working zone
- nearly linear pressure drop gradient for the whole bed depth; therefore operation with higher bed depth possible.

**Lewatit S 1467** complies with current German legislation on food and food-contact uses and is chemically in compliance with the FDA regulations 21 CFR 173.25 (a).

**Lewatit S 1467** is in compliance with the European Resolution AP (97)-1 with regard to Total Organic Carbon (TOC) release according the AFNOR Test (method T90-601).

When using **Lewatit S 1467** to treat potable water and the aqueous solutions listed above, special care should be given to the initial cycles of the new resin. Please refer to recommended start-up conditions contained in this data sheet.

The special properties of this product can only be fully utilized if the technology and process used correspond to the current state-of-the-art. Further advice in this matter can be obtained from Bayer AG, Business Group Specialty Products, Business Unit Ion Exchange Resins and Water Chemicals.



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## General Description

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

## Physical and Chemical Properties

Average bead size	* (AB)	mm	0.6 (+/- 0.05)
Share of beads in the range	* AB +/- 0.05 mm	%	> 80
Bulk density	(+/- 5%)	g/l	820
Density		approx. g/ml	1.28
Water retention		%	42 - 48
Total capacity*	H-form	min. eq/l	2.0
Volume change	Na+ -> H+	approx. %	+ 8
Stability	at pH-range		0 - 14
Storability	of the product	min. years	2
Storability	at temperature	°C	-10 - 40
Standard packaging	25-l-polyethylen bag		

\* 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	at viscosity 1 mPa	approx. kPa*h/m <sup>2</sup>	1.0
Max. pressure loss		kPa	200
Linear velocity	exhaustion	max. m/h	-
Linear velocity	backwash (20 °C)	approx. m/h	10 - 12
Bed expansion	(20°C, per m/h)	approx. %	4
Freeboard	as % of resin volume	%	60
Regenerant			NaCl
Countercurrent regeneration level		g/l	70 - 120
Cocurrent regeneration level		g/l	120 - 250
Regenerant concentration		%	8 - 12
Linear velocity	regeneration	approx. m/h	5
Linear velocity	rinsing	approx. m/h	5
Rinse water requirement		approx. BV	4

## Recommended Start-up Conditions\*

(in drinking water applications only)

Rinsing	Drinking water	
Linear velocity	approx. m/h	5
Rinse water requirement	approx. BV	20
Temp. of rinse water	Operating temperature	
Regeneration	with the double normal quantity	
Rinsing	with the double normal quantity	

\* The recommended 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.

\*\* progressive Regeneration

\*\*\* 100m/h for polishing



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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, chemicals treatment etc., can be disposed under code number 190 806. A certificate of disposal is required.

Bayer AG  
BG Specialty Products  
BU Ion Exchange Resins and Water Chemicals  
D-51368 Leverkusen

Internet: <http://www.lewatit.com>

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