

Lewatit® S 1568 is a monodisperse, food grade, gel-type, strongly acidic cation exchange resin based on a styrene-divinylbenzene copolymer.

The favourable kinetics allows a distinctly higher operating capacity as this applies to comparable ion exchange resins with a heterodisperse bead size distribution.

Lewatit® S 1568 is very suitable for:

- the softening of aqueous solutions, specially of juices occurring in the production of sugar and pectine
- the decationization of solutions of organic products, e.g. beets, sugar cane, starch sugar, glycerol, gelatin, food grade acids etc.
- the production of amino acids, e.g. lysine

Lewatit® S 1568 provides the resin filling with the following features:

- a high exchange capacities in the regeneration and loading processes
- a very good utilization of the total capacity
- a low demand for wash water
- a continuous flow of regeneration agents, water and solutions, therefore an equally shaped working zone
- an almost linear pressure loss gradient along the whole bed depth, therefore an operation at higher bed depths is possible

If using **Lewatit® S 1568** for treating potable water and the a.m. aqueous solutions, you have to follow our recommendations for the start-up which are available on request.

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 Lanxess, Business Unit Liquid Purification Technologies.

Common Description

Delivery form	Na ⁺
Functional group	Sulfonic acid
Matrix	Styrenic
Structure	Gel
Appearance	Dark brown

Specified Data

Uniformity coefficient		max.	1.1
Mean bead size	d50	mm	0.55-0.65
Total capacity (delivery form)		min. eq/L	1.8

Typical Physical and Chemical Properties

Bulk density for shipment	(+/- 5%)	g/L	810
Density		approx. g/mL	1.3
Water retention (delivery form)		approx. weight %	45-50
Volume change (Na ⁺ - H ⁺)		max. approx. %	12
Stability pH range			0-14
Stability temperature range		°C	1-120
Storage time (after delivery)		max. years	2
Storage temperature range		°C	-20 - +40

Operation

Operating temperature		max. °C	120
Operating pH range	during exhaustion		0-14
Bed depth for single column		min. mm	800
Back wash bed expansion per m/h (20°C)		%	4
Specific pressure loss kPa*h/m ² (15°C)		kPa*h/m ² (15°C)	1
Max. pressure loss during operation		kPa	200
Specific flow rate		max. BV/h	20
Freeboard	during backwash	min. vol. %	80-100

This document contains important information and must be read in its entirety.

Regeneration

HCl regeneration	concentration	approx. wt. %	4-6
HCl regeneration	quantity co-current	min. g/L resin	100
HCl regeneration	quantity counter-current	min. g/L resin	55-65
H ₂ SO ₄ regeneration	concentration	approx. wt. %	1.5-3
H ₂ SO ₄ regeneration	quantity co-current	min. g/L resin	150
H ₂ SO ₄ regeneration	quantity counter-current	min. g/L resin	80
NaCl regeneration	concentration	approx. wt. %	8-10
NaCl regeneration	quantity co-current	min. g/L resin	200
NaCl regeneration	quantity counter-current	min. g/L resin	100
NaOH regeneration	concentration	approx. wt. %	4
NaOH regeneration	quantity co-current	min. g/L resin	40
Regeneration contact time		min. minutes	20
Slow rinse at regeneration flow rate		min. BV	2
Fast rinse at service flow rate		min. BV	4

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Additional Information & Regulations

Safety precautions

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

Toxicity

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

Disposal

In the European Community ion exchange resins have to be disposed, according to the European waste nomenclature which can be accessed on the internet-site of the European Union.

Storage

It is recommended to store ion exchange resins at temperatures above the freezing point of water under roof in dry conditions without exposure to direct sunlight. If resin should become frozen, it should not be mechanically handled and left to thaw out gradually at ambient temperature. It must be completely thawed before handling or use. No attempt should be made to accelerate the thawing process.

Packaging

The experience has shown that the packaging stability for reliable resin containment is limited to 24 months under the storage conditions described above. It is therefore recommended to use the product within this time frame; otherwise the packaging condition should be checked regularly.

LENNTECH

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