

Lewatit® S 4528 is a Food grade, weak basic macroporous anion exchange resin (tertiary and very low level of quaternary amino groups) based on polystyrene. It is bead-shaped and has a special bead size distribution for use in the following processes:

- » Lewatit® WS system (fluidized bed)
- » Lewatit® VWS system (compound fluidized bed)
- » Standard co current regenerated system

Lewatit® S 4528 is suitable in the free base form for:

- » acid removal and simultaneous decolorization of solutions of organic products such as sugar, gelatine, glycerin, grape must, whey, fruit concentrates, etc.

Its macroporous structure ensures very good adsorption of both acid and organic substances (e.g. colorants). These are desorbed by regeneration with caustic soda solution. On account of its low basicity, **Lewatit® S 4528** can be used in the treatment of products sensitive to alkali. The partial isomerisation resulting from contact with the ion exchange resin (e.g. conversion of glucose to fructose and mannose) is negligible.

When using **Lewatit® S 4528** 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 the recommended start-up conditions 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 Ion Exchange Resins.

General Description

Ionic form as shipped	free base
Functional group	tertiary amine
Matrix	crosslinked polystyrene
Structure	macroporous
Appearance	beige, opaque

Physical and Chemical Properties

	metric units	
Uniformity Coefficient*	max.	1.6
Bead size* > 90 %	mm	0.4 - 1.2 5
Effective size*	mm	0.5 (+/- 0.0) 5 5
Bulk density (+/- 5 %)	g/l	620
Density	approx. g/ml	1.02
Water retention	wt. %	46 - 52
Total capacity*	min. eq/l	1.7
Volume change free base --> Cl ⁻	max. vol. %	45
Stability at pH-range		0 - 14
Storability of the product	max. years	2
Storability temperature range	°C	-20 - 40

* Specification values subjected to continuous monitoring.

Recommended Operating Conditions*

		metric units	
Operating temperature		max. °C	80
Operating pH-range			0 - 8
Bed depth		min. mm	800
Specific pressure drop	(15 °C)	approx. kPa*h/m ²	1.1
Pressure drop		max. kPa	250
Linear velocity	operation	max. m/h	-
Linear velocity	backwash (20 °C)	approx. m/h	2 - 3
Bed expansion	(20 °C, per m/h)	approx. vol. %	30
Freeboard	backwash (extern / intern)	vol. %	80 - 100
Regenerant			NaOH
Counter current regeneration	level	approx. g/l	50 - 80
Counter current regeneration	concentration	wt. %	2 - 4
Co current regeneration	level	approx. g/l	50 - 80
Co current regeneration	concentration	approx. wt. %	2 - 4
Linear velocity	regeneration	approx. m/h	5
Linear velocity	rinsing	approx. m/h	5 - 8
Rinse water requirement	slow / fast	approx. BV	6

* 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 data are to be found in our Technical Information Sheets.

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.

This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.



WATER TREATMENT SOLUTIONS

info@lennotech.com Tel. +31-152-610-900

www.lennotech.com Fax. +31-152-616-289

For more information or a quote, please use the