

Lewatit® S 2528 is a Food grade, strongly acidic, highly crosslinked macroporous cation exchange resin based on crosslinked 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 systems.

In the hydrogen form **Lewatit® S 2528** is suitable for:

- » decationisation of solutions of organic products, e.g. sugar beet, sugar cane, starch sugar, and of solutions of organic products, e.g. glycerin, gelatine, whey etc... ,
- » extraction of amino acids, e.g. from molasses in the sodium form,
- » softening of thin juice, e.g. Gryllus process in the sodium form,
- » removal of alkali ions from B-green, e.g. Quentin process.

The macroporous structure of **Lewatit® S 2528** facilitates the adsorption of hydrophilic highmolecular cationic organic substances. The organic substances, e.g. colorants, can easily be desorbed by regeneration with caustic soda solution.

When using **Lewatit® S 2528** 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	Na ⁺
Functional group	sulfonic acid
Matrix	crosslinked polystyrene
Structure	macroporous
Appearance	beige-grey, opaque

Physical and Chemical Properties

		metric units	
Total capacity*		min. eq/l	1.75
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	760
Density		approx. g/ml	1.27
Water retention		wt. %	45 - 50
Volume change	Na ⁺ --> H ⁺	max. vol. %	7
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	120		
Operating pH-range			0 - 14		
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	14 - 18		
Bed expansion	(20 °C, per m/h)	approx. vol. %	3.5		
Freeboard	backwash (extern / intern)	vol. %	80 - 100		
Regenerant			HCl	H ₂ SO ₄	NaCl
Counter current regeneration	level	approx. g/l	HCl H ₂ S O ₄ NaCl	60 100 100	
Counter current regeneration	concentration	wt. %	HCl H ₂ S O ₄ NaCl	4 1.5 8	- / 3** 10
Co current regeneration	level	approx. g/l	HCl H ₂ S O ₄ NaCl	100 150 200	
Co current regeneration	concentration	approx. wt. %	HCl H ₂ S O ₄ NaCl	4 1.5 8	- / - 10
Linear velocity	regeneration	approx. m/h	HCl H ₂ S O ₄ NaCl	5 10 5	- 20
Linear velocity	rinsing	approx. m/h	5		
Rinse water requirement	slow / fast	approx. BV	2.5		

* 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.

** Regeneration progressive

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.

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

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