

Lewatit® S 5528 is a food grade, macroporous, strongly basic (type I) anion exchange resin based on a crosslinked polyacrylate. It is bead-shaped and has a special bead size distribution for use in the following processes:

- Co-current system
- Counter-current systems (Lewatit® WS system / fluidized bed)
- Counter-current systems (Lewatit® VWS system / compound fluidized bed)

In its chloride form, the **Lewatit® S 5528** is suitable for the decolorization of:

- syrups from sugar production, especially cane sugar
- solutions of organic products, e. g. glycerin, amino acids

The macroporous structure and balanced resin matrix of **Lewatit® S 5528** facilitate the kinetics of adsorption and desorption. Substances adsorbed, e. g. high-molecular hydrophilic anionic organic substances and colorants from sugar solutions, can be desorbed easily by regeneration with a neutral or alkaline sodium chloride solution.

Lewatit® S 5528 is therefore highly recommended for use wherever complete and rapid removal of a relatively high concentration of organic substances is required. Use in combination with other Lewatit® adsorber resins such as **Lewatit® S 6368 A** allows simultaneous fine polishing.

If using **Lewatit® S 5528** 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 Liquid Purification Technologies.

Common Description

Delivery form	Cl ⁻
Functional group	Quaternary ammonium; type 1
Matrix	Acrylic
Structure	Macroporous
Appearance	White, opaque

Specified Data

Uniformity coefficient		max.	1.8
Range of size for >90 vol% of all beads		mm	0.40-1.60
Effective size	d10	mm	0.50-0.65
Total capacity (delivery form)		min. eq/L	0.85

Typical Physical and Chemical Properties

Bulk density for shipment	(+/- 5%)	g/L	720
Density		approx. g/mL	1.07
Water retention (delivery form)		approx. weight %	63-71
Volume change (Cl ⁻ -OH ⁻)		max. approx. %	25
Stability pH range			0-14
Stability temperature range		°C	1-80 (Cl)
Storage time (after delivery)		min. years	2
Storage temperature range		°C	-20 - +40

Operation

Operating temperature		max. °C	80 (Cl)
Operating pH range	during exhaustion		0-12
Bed depth for single column		min. mm	800
Back wash bed expansion per m/h (20°C)		%	10
Specific pressure loss kPa*h/m ² (15°C)		kPa*h/m ² (15°C)	1.1
Max. pressure loss during operation		kPa	250
Specific flow rate		max. BV/h	5
Freeboard	during backwash	min. vol. %	80-100

Regeneration

NaCl regeneration	concentration	approx. wt. %	10
NaCl regeneration	quantity co-current	min. g/L resin	200
NaCl regeneration	quantity counter-current	min. g/L resin	200
Regeneration contact time		min. minutes	20
Slow rinse at regeneration flow rate		min. BV	2
Fast rinse at service flow rate		min. BV	4

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

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.

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