

**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 Corporation.

# PRODUCT INFORMATION

## LEWATIT® S 5528



### Common Description

Delivery form	Cl <sup>-</sup>
Functional group	Quaternary ammonium; type 1
Matrix	Acrylic
Structure	Macroporous
Appearance	White, opaque

### Specified Data

		US Units			
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)		kg/ft <sup>3</sup>	19	min. eq/L	0.85

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

Edition: 2024-09-03  
Previous Edition: 2020-10-23

## Typical Physical and Chemical Properties

		US Units		Metric Units	
Bulk density for shipment	(+/- 5%)	lb/ft <sup>3</sup>	45	g/L	720
Density				approx. g/mL	1.07
Water retention (delivery form)				approx. weight %	63-71
Volume change (Cl <sup>-</sup> -OH <sup>-</sup> )				max. approx. %	25
Stability pH range					0-14
Stability temperature range				°C	1-80 (Cl)
Storage time (after delivery)				min. years	2
Storability temperature range				°C	-20 - +40

## Operation

		US Units		Metric Units	
Operating temperature		max. °F	176	max. °C	80 (Cl)
Operating pH range	during exhaustion				0-12
Bed depth for single column		min. inches	31	min. mm	800
Back wash bed expansion per m/h (20°C)				%	10
Specific pressure loss (15°C)				kPa*h/m <sup>2</sup>	1.1
Max. pressure loss during operation		PSI	36	kPa	250
Specific flow rate		max. gpm/ft <sup>3</sup>	0.63	max. BV/h	5
Freeboard	during backwash			min. vol. %	80-100

## Regeneration

		US Units		Metric Units	
NaCl regeneration	concentration	approx. wt. %	10	approx. wt. %	10
NaCl regeneration	quantity co-current	min. lb/ft <sup>3</sup>	12.5	min. g/L resin	200
NaCl regeneration	quantity counter-current	min. lb/ft <sup>3</sup>	12.5	min. g/L resin	200
Regeneration contact time		min. minutes		min. minutes	20
Slow rinse at regeneration flow rate		min. gal/ft <sup>3</sup>	15	min. BV	2
Fast rinse at service flow rate		min. gal/ft <sup>3</sup>	30	min. BV	4

## Additional Information & Regulations

**PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE OF PRODUCTS MENTIONED HEREIN IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING ANY PRODUCT, ALWAYS READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION.**

### **Safety precautions**

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

### **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 conditions**

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.

### **Storage time**

The recommended storage time for this product is explained in the technical document "Technical guidelines on the storage of Lewatit® ion exchange resins" available for download on our website. Please use the following link for more information: <https://lanxess.com/en/products-and-brands/brands/lewatit/literature>

### **Packaging**

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

# PRODUCT INFORMATION

## LEWATIT® S 5528



The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information.

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Edition: 2024-09-03  
Previous Edition: 2020-10-23

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