

Lewatit® S 8227 is a food grade, macroporous, weakly acidic cation exchange resin based on a crosslinked polyacrylate. It is bead-shaped and has a special bead size distribution for use in household filter systems and technical drinking water plants.

In its hydrogen form, **Lewatit® S 8227** is suitable for the decarbonisation and softening of drinking water, e.g. brewery water treatment, and the use in household filter systems

Since it has a low regenerant requirement, **Lewatit® S 8227** is a particularly economical product for the decarbonisation of drinking water and liquids which are used as foodstuffs or in the production of foodstuffs.

When using **Lewatit® S 8227** 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.

For a use in the treatment of potable water in France, a regeneration has to be done, according to the agreement, by only applying solutions of HCl or H₂SO₄, and for disinfection, only a solution of H₂O₂ may be used. Their concentrations have to comply with the present recommendations. These auxiliary products have to respect to purity criteria with respect to the below mentioned norms:

- » HCl: NF EN 939
- » H₂SO₄: NF EN 899
- » H₂O₂: NF EN 902

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 (LPT).

General Description

Ionic form as shipped	H ⁺
Functional group	Carboxylic acid
Matrix	Crosslinked polyacrylate
Structure	Macroporous
Appearance	White, opaque

Specified Data

		metric units	
Uniformity Coefficient		max.	1.8
Bead size	> 90 %	mm	0.4 - 1.6
Effective size		mm	0.53 (+/- 0.05)
Total capacity		min. eq/l	4.3

Physical and Chemical Properties

		metric units	
Bulk density	(+/- 5 %)	g/l	770
Density		approx. g/ml	1.18
Water retention		wt. %	48 - 56
Volume change	H ⁺ --> Ca ²⁺	max. vol. %	7
Volume change	H ⁺ --> Na ⁺	max. vol. %	60
Stability	at pH-range		0 - 14
Stability	temperature range	°C	-20 - +70
Storability	of the product	max. years	1
Storability	temperature range	°C	-20 - +40

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

Recommended Operating Conditions*

		metric units	
OPERATION			
Operating temperature		max. °C	70
Operating pH-range			5 - 14
Bed depth		min. mm	800
Specific pressure drop	at viscosity 1 mPa*s	approx. kPa*h/m ²	1.1
Pressure drop		max. kPa	250
Linear velocity	operation	max. m/h	40
REGENERATION, COUNTER-CURRENT			
Regenerant	type		HCl H ₂ SO ₄
Regenerant	quantity	approx. g/l	HCl 70 H ₂ SO ₄ 90
Regenerant	concentration	wt. %	HCl 3 - 6 H ₂ SO ₄ 0.5 - 0.8
Linear velocity		approx. m/h	5 - 20
Linear velocity	rinsing	approx. m/h	5 - 20
Rinse water requirement	slow / fast	approx. BV	3.5
REGENERATION, CO-CURRENT			
Regenerant	type		HCl H ₂ SO ₄
Regenerant	quantity	approx. g/l	HCl 70 H ₂ SO ₄ 90
Regenerant	concentration	approx. wt. %	HCl 3 - 6 H ₂ SO ₄ 0.5 - 0.8
Linear velocity	backwash (20 °C)	approx. m/h	12 - 14
Linear velocity	rinsing	approx. m/h	5 - 20
Bed expansion	(20 °C, per m/h)	approx. vol. %	5
Freeboard	backwash (extern / intern)	vol. %	60 - 80

* 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.

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