

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.

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.

Common Description

Delivery form	H ⁺
Functional group	Carboxylic acid
Matrix	Crosslinked polyacrylate
Structure	Macroporous
Appearance	white, opak

Specified Data

Uniformity coefficient		max.	1.8
Range of size for ≥ 90 vol% of all beads		mm	0.4-1.6
Effective size	d10	mm	0.46-0.56
Total capacity (delivery form)		min. eq/L	4.3

Typical Physical and Chemical Properties

Bulk density for shipment	(+/- 5%)	g/L	770
Density		approx. g/mL	1.2
Water retention (delivery form)		approx. weight %	47-53
Volume change (H ⁺ - Na ⁺)		max. approx. %	70
Stability pH range			0-14
Stability temperature range		°C	1-70
Storage temperature range		°C	-20-+40

Operation

Operating temperature		max. °C	70
Operating pH range	during exhaustion		5-14
Bed depth for single column		min. mm	800
Back wash bed expansion per m/h (20°C)		%	5
Specific pressure loss kPa*h/m ² (15°C)		kPa*h/m ² (15°C)	1.8
Max. pressure loss during operation		kPa	250
Freeboard	during backwash	min. vol. %	60-80

Regeneration

HCl regeneration	concentration	approx. wt. %	3-6
HCl regeneration	quantity co-current	min. g/L resin	120
HCl regeneration	quantity counter-current	min. g/L resin	70
H ₂ SO ₄ regeneration	concentration	approx. wt. %	0.5 - 0.8
H ₂ SO ₄ regeneration	quantity co-current	min. g/L resin	150
H ₂ SO ₄ regeneration	quantity counter-current	min. g/L resin	90
Regeneration contact time		min. minutes	20
Slow rinse at regeneration flow rate		min. BV	2
Fast rinse at service flow rate		min. BV	2

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 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 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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