PRODUCT INFORMATION
LEWATIT® S 2328

Lewatit® S 2328 is a Food grade, strongly acidic, loosely 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 (fluidised bed)
- Lewatit® VWS system (compound fluidised bed)
- Standard co current regenerated system

Lewatit® S 2328 contains sulphonic acid groups and is therefore highly suitable for heterogeneous proton catalysis of organic reactions. Optimum crosslinking, its porous structure and the large inner surface area of the polymer give larger molecules good access to the active centre of the resin beads. In the hydrogen form **Lewatit® S 2328** is therefore particularly suitable for:

- inversion of sugar solutions, e.g. in the production of fructose and glucose
- decationisation as part of the inversion of sugar solutions
- decolorisation of sugar solutions containing hydrophilic high-molecular cationic organic substances, e.g. molasses and amino acid solutions

When using **Lewatit® S 2328** 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.

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General Description

Ionic form as shipped	H^+
Functional group	sulfonic acid
Matrix	crosslinked polystyrene
Structure	macroporous
Appearance	beige-grey, opaque

Physical and Chemical Properties

		metric units	
Uniformity Coefficient*		max.	1.7
Bead size*	> 90 %	mm	0.4 - 1.25
Effective size*		mm	0.48 - 0.58
Bulk density	(+/- 5 %)	g/l	750
Density		approx. g/ml	1.1
Water retention		wt. %	65 - 75
Total capacity*		min. eq/l	1.0
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/m²	1.1
Pressure drop		max. kPa	250
Linear velocity	backwash (20 °C)	approx. m/h	12
Bed expansion	(20 °C, per m/h)	approx. vol. %	7
Freeboard	backwash (extern / intern)	vol. %	80 - 100
Regenerant			HCl H_2S O_4
Counter current regeneration	level	approx. g/l	HCl 60 H_2S 90 O_4
Counter current regeneration	concentration	wt. %	6
Linear velocity	regeneration	approx. m/h	5
Linear velocity	rinsing	approx. m/h	5
Rinse water requirement	slow / fast	approx. BV	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.

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.

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