PRODUCT INFORMATION
LEWATIT® MonoPlus M 500

Lewatit® MonoPlus M 500 is a strongly basic, gelular anion exchange resin with beads of uniform size (monodisperse) based on a styrene-divinylbenzene copolymer. The monodisperse beads are chemically and osmotically highly stable. The optimized kinetics lead to an increased operating capacity compared to ion exchange resins with heterodisperse bead size distribution.

Lewatit® MonoPlus M 500 is especially applicable for:

» the demineralization of water for industrial steam generation, e.g. Lewatit® WS System, Lewatit® Liftbed System or Lewatit® Rinsebed System
» polishing by a Lewatit® Multistep System in combination with
Lewatit® MonoPlus S 108 H

Lewatit® MonoPlus M 500 is adding special features to the resin bed:

» high exchange flow rates during regeneration and loading
» good utilization of the total capacity
» a low demand for rinse water
» homogenous throughput of regenerants, water and solutions; therefore an homogeneous working zone
» nearly linear pressure drop gradient for the whole bed depth; therefore an operation with higher bed depth possible

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 amine, type I
Matrix	Crosslinked polystyrene
Structure	Gel
Appearance	Yellow, translucent

Specified Data

	metric units	
Uniformity coefficient	max.	1.1
Mean bead size	microns	620 (+/- 50)
Total capacity	min. eq/L	1.3
Water retention	wt. %	48 - 55

Typical Physical and Chemical Properties

		Metric Units	
Bulk density for shipment	(+/- 5 %)	g/L	690
Density		approx. g/ml	1.08
Volume change	Cl^- --> OH^-	max. vol. %	20
Stability	pH range		0 - 14
Stability	temperature range	°C	1 - + 70
Storability	of the product	max. years	2
Storability	temperature range	°C	- 20 - + 40

Recommended Operating Conditions*

		metric units	
OPERATION			
Operating temperature		max. °C	70
Operating pH-range			0 - 12
Bed depth		min. mm	800
Bed expansion	at 20°C, per m/h	approx. vol. %	11
Specific pressure drop	at 15°C	approx. kPa*h/m²	1
Pressure drop	during operation	max. kPa	200
Specific flow rate	Exhaustion	max. BV/h	60
REGENERATION			
NaOH Regeneration	Concentration	approx. wt. %	2 - 6
NaOH Regeneration	Quantity Counter-current	min. g/L	50
NaOH Regeneration	Quantity Co-current	min. g/L	80
Contact time		min. minutes	20
Slow rinse (regeneration flow rate)		min. BV	2
Fast rinse (service flow rate)		min. BV	2

* 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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