Product Information

LEWATIT® MonoPlus M 800

Lewatit MonoPlus M 800 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 800 is especially applicable for

- polishing by a Lewatit Multistep System or mixed bed in combination with **Lewatit MonoPlus S 100 H**

Lewatit MonoPlus M 800 is adding special features to the resin bed :

- high exchange flow rates during regeneration and loading
- good utilization of the total capacity
- low rinse water demand
- homogenous throughput of regenerants, water and solutions
- nearly linear pressure drop gradient for the whole bed depth; therefore operation with higher bed depth possible
- good separation behavior of the components in a mixed bed application

The special properties of this product can only be fully utilized if the technology and process used correspondend to the current state-of-the-art. Further advice in this matter can be optained from Bayer Chemicals, Business Unit Ion Exchange Resins.

General Description

Ionic form as, as shipped	Cl-
Functional group	quarternary amine, type I
Matrix	crosslinked polystyrene
Structure	gel type beads
Appearance	yellow, translucent

Physical and Chemical Properties

Uniformity coefficient*		max.	1.1
Mean bead size	*(AB)	mm	0.60 (+/- 0.05)
Share of beads in the range	*AB +/- 0.05 mm	%	>85
Bulk density	(+/- 5%)	g/l	670
Density		approx. g/ml	1.08
Water retention		%	50 - 60
Total capacity*		min. eq/l	1.4
Volume change	Cl- -> OH-	max. %	22
Stability	at pH-range		0 - 14
Storability	of the product	max. Years	2
Storability	at temperature	°C	+1 - 40

*These data are specification values and are subject to continous monitoring.

Recommended Operating Conditions*

Operating temperature		max. °C	70
Operating pH-range			0 - 12
Bed depth		min. mm	800
Specific pressure loss	(15°C)	approx. kPa*h/m²	1,0
Max. pressure loss		kPa	200
Linear velocity	exhaustion	max. m/h	60***
Linear velocity	backwash (20 °C)	approx. m/h	7
Bed expansion	(20 °C, per m/h)	approx. %	11
Freeboard	as % of resin volume	%	80 - 100
Regenerant			NaOH
Cocurrent regeneration	level	approx. g/l	100
Cocurrent regeneration	concentration	approx. %	3 - 5
Linear velocity	Rinsing	approx. m/h	5
Rinse water requirement		approx. BV	10
Mixed bed operation			
Bed depth		min. mm	500
Regenerant	level	approx. g/l	100
Regenerant	concentration	approx. %	2 - 6

*The recommend 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 are to be found in our Technical Information Sheets.
**progressive Regeneration ***100m/h for polishing

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

A proprietary technical recycling process for used ion exchanger is unknown to us. In the European Community the following possibilities for disposal can be utilized.Resins used for water treatment and in the sugar industry can be disposed under code number 190 905. Our preference is to recommend disposal in an industrial incinerator.Ion exchange resins which contain impurities after use in industrial processes, e.g. electroplating, chemicals treatment etc., can be disposed under code number 190 806. A certificate of disposal is required.

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