PRODUCT INFORMATION
LEWATIT® MonoPlus M 800 KR

Lewatit® MonoPlus M 800 KR is a strongly basic, premium grade, gel-type anion exchange resin with beads of uniform size (monodisperse), in highly regenerated form (min. 95% OH^-) and purified (extremely low content of desorbable chloride ions!) to meet nuclear industry specifications.
Lewatit® nuclear resins (Lewatit® KR) are noted for their outstanding mechanical and chemical stability and their high osmotic stability.

Because of their excellent hydrodynamic properties, Lewatit® KR resins allow particulary high flow rates. The extremely high monodispersity (uniformity coefficient: max 1.1) and very low fines content of max 0.1 % (<0.315 mm) result in particularly low pressure losses compared with standard resins.
Used in radioactive water circuits, they provide a number of special tasks and guarantee a water quality that fully complies with the requirements of the nuclear power industry.

Lewatit® MonoPlus M 800 KR is particularly suitable for the:

- removal of anions, including radioactive isotopes, from aqueous solutions (including boric acid)
- decontamination of circuits in nuclear reactor plants
- treatment of primary coolant e.g. in pressure water reactors
- purification of steam generator blow down irrespective of the conditioning with Levoxin (hydrazine), ethanolamine or morpholine
- polishing in the primary and secondary sections as a mixed bed component with **Lewatit® MonoPlus SP 112 KR** or **Lewatit® MonoPlus S 200 KR**

Important!
Rinse carefully with demineralized water prior to service of mixing with **Lewatit® MonoPlus SP 112 KR** or **Lewatit® MonoPlus S 200 KR**.

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.

General Description

Ionic form as shipped	OH^-
Functional group	quaternary amine, type I
Matrix	crosslinked polystyrene
Structure	gel type beads
Appearance	light amber, translucent

Physical and Chemical Properties

		metric units	
Uniformity Coefficient*		max.	1.1
Mean bead size*		mm	0.64 (+/- 0.05)
Bulk density	(+/- 5 %)	g/l	680
Density		approx. g/ml	1.07
Water retention		wt. %	60 - 65
Total capacity*		min. eq/l	1.2
Volume change	OH^- --> Cl^-	max. vol. %	- 18
Stability	at pH-range		0 - 14
Friability	average	g/bead	700
Friability	> 200 g/bead	min. vol %	95
Storability	of the product	max. months	12
Storability	temperature range	°C	-20 - 40
Ionic conversion	OH^-	min. eq%	95
Ionic conversion	CO_3^{2-}	max. eq%	5
Ionic conversion	Cl^-	max. eq%	0.2
Ionic conversion	SO_4^{2-}	max. eq%	0.1

* Specification values subjected to continuous monitoring.

Trace Elements Analysis

Na	max.	mg / kg dry resin	20
Ca	max.	mg / kg dry resin	50
K	max.	mg / kg dry resin	20
Fe	max.	mg / kg dry resin	50
Cu	max.	mg / kg dry resin	10
Al	max.	mg / kg dry resin	40
Co	max.	mg / kg dry resin	10
Pb	max.	mg / kg dry resin	10
Hg	max.	mg / kg dry resin	< 1
SiO_2	max.	mg / kg dry resin	100
Sulfate	max.	mg / kg dry resin	500

Recommended Operating Conditions*

		metric units	
Operating temperature		max. °C	70
Operating pH-range			0 - 12
Bed depth		min. mm	800
Specific pressure drop	(15 °C)	approx. kPa*h/m²	1.0
Pressure drop		max. kPa	200
Linear velocity	operation	max. m/h	5 - 120
Linear velocity	backwash (20 °C)	approx. m/h	7
Bed expansion	(20 °C, per m/h)	approx. vol. %	11
Freeboard	backwash (extern / intern)	vol. %	80 - 100
Mixed bed operation			
Bed depth		min. mm	600
Regenerant	type		NaOH
Regenerant	level	approx. g/l	100
Regenerant	concentration	approx. wt. %	5 - 10
Rinse water requirement	slow / fast	approx. BV	2 / 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.

*** 100m/h for polishing

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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For more information or a quote, please use the

Contact Form