ATS WATER TECHNOLOGY

PRODUCT INFORMATION
LEWATIT® MonoPlus MP 800 KR

Lewatit®

Lewatit® MonoPlus MP 800 KR is a strongly basic, macroporous anion exchange resin (type I) with beads of uniform size (monodisperse) in highly regenerated and purified form 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 behavior, Lewatit® KR resins allow particularly high flow rates. The extremely high monodispersity and very low fines content 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 MP 800 KR is particularly suitable for the:

» the removal of anions, including radioactive isotopes, from aqueous solutions (including boric acid)
» the decontamination of circuits in nuclear reactor plants
» the 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**, **Lewatit® MonoPlus S 200 KR** or **Lewatit® MonoPlus S 215 KR**

Important!
Rinse carefully with demineralized water prior to service or mixing with **Lewatit® MonoPlus SP 112 KR**, **Lewatit® MonoPlus S 200 KR** or **Lewatit® MonoPlus S 215 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 Corporation.

Common Description

Delivery form	OH^-
Functional group	quaternary ammonium type 1
Matrix	styrenic
Structure	macroporous
Appearance	light brown, opaque

Specified Data

		US Units			
Uniformity coefficient				max.	1.1
Mean bead size	d50			mm	0.65 (+-0.05)
Total capacity (delivery form)		kgr/ft^3	17.5	min. eq/L	0.8

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Typical Physical and Chemical Properties

		US Units		Metric Units	
Bulk density for shipment	(+/- 5%)	lb/ft³	40.6	g/L	680
Density				approx. g/mL	1.07
Water retention (delivery form)				approx. weight %	60-68
Volume change (OH^- -Cl^-)				max. approx. %	-22
Stability pH range					0-14
Storability temperature range				°C	-20 - +40
Ionic conversion OH^-				min. eq. %	95
Ionic conversion CO_3^{2-}				max. eq. %	5

Operation

		US Units		Metric Units	
Operating temperature		max. °F	158	max. °C	70
Operating pH range	during exhaustion				0-12
Bed depth for single column		min. inches	31.5	min. mm	800
Bed depth per component in mixed bed		min. inches		min. mm	500
Back wash bed expansion per m/h (20°C)				%	10
Specific pressure loss (15°C)				kPa*h/m²	1
Max. pressure loss during operation		PSI	44	kPa	250
Specific flow rate		max. gpm/ft3	13	max. BV/h	100

Trace Impurities

		Metric Units	
Na		max. mg/kg dry resin	20
Fe		max. mg/kg dry resin	100
Cu		max. mg/kg dry resin	30
Al		max. mg/kg dry resin	50
Co		max. mg/kg dry resin	30
Pb		max. mg/kg dry resin	30
Hg		max. mg/kg dry resin	20
SiO_2		max. mg/kg dry resin	100

Additional Information & Regulations

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE OF PRODUCTS MENTIONED HEREIN IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING ANY PRODUCT, ALWAYS READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION.

Safety precautions
Strong oxidants, e.g. nitric acid, can cause violent reactions if they come into contact with ion exchange resins.

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 within the product safety information. It is therefore recommended to use the product within this time frame; otherwise the packaging condition should be checked regularly.

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