ATS WATER TECHNOLOGY

PRODUCT INFORMATION
LEWATIT® MonoPlus TP 109

Lewatit®

Lewatit® MonoPlus TP 109 is a macroporous, monodisperse, polystyrene-based anion exchange resin for the selective adsorption of anions, e.g. PFAS, perchlorate and nitrate contaminants.

Compared to standard commercially available anion exchange resins it has a higher selectivity for contaminants which enables efficient removal.

Lewatit® MonoPlus TP 109 is especially suitable for use in the following applications:

- removal of PFAS from waste and process water
- regeneration of PFAS loaded resin with alcohol salt mixture
- removal of nitrate (NO_3^-) from water
- removal of iodide and bromide from water
- removal of perchlorate (ClO_4^-), chlorate (ClO_3^-) and bromate (BrO_3^-) from water
- removal of chlorate (ClO_3^-) from concentrated caustic (NaOH)

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	Cl^-
Functional group	quaternary amine
Matrix	styrenic
Structure	macroporous
Appearance	white, opaque

Specified Data

Uniformity coefficient		max.	1.1
Mean bead size	d50	mm	0.62 (+/- 0.05)
Total capacity (delivery form)		min. eq/L	0.6

Typical Physical and Chemical Properties

		Metric Units	
Bulk density for shipment	(+/- 5%)	g/L	630
Density		approx. g/mL	1.02
Water retention (delivery form)		approx. weight %	59-64
Volume change (during exhaustion)		max. approx. %	5
Stability pH range			0-14
Stability temperature range		°C	1-80
Storability temperature range		°C	-20 - +40

Operation

		Metric Units	
Operating temperature		max. °C	80
Operating pH range	during exhaustion		0-10
Bed depth for single column		min. mm	800
Back wash bed expansion per m/h (20°C)		%	18
Specific pressure loss (15°C)		kPa*h/m²	1.3
Max. pressure loss during operation		kPa	250
Specific flow rate		max. BV/h	20
Freeboard	during backwash	min. vol. %	80-100

Regeneration

		Metric Units	
NaCl regeneration	concentration	approx. wt. %	8-10
NaCl regeneration	quantity co-current	min. g/L resin	80-300
Regeneration contact time		min. minutes	20
Slow rinse at regeneration flow rate		min. BV	5
Fast rinse at service flow rate		min. BV	5

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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