PRODUCT INFORMATION
LEWATIT® NM 60 SG

Lewatit® NM 60 SG is a premium grade, gel type, high capacity, high purity mixed ion exchange resin prepared with a 1:1 chemically equivalent ratio of cation to anion resin. **Lewatit® NM 60 SG** is a mixture of gel type cation exchange resin in the hydrogen (H) form, and a gel type anion exchange resin in the hydroxide (OH) form. The mixed resin is prepared from component resins which have been manufactured with the highest degree of purity and conversion to the H / OH form. **Lewatit® NM 60 SG** is supplied pre-mixed as spherical beads in a heterodispersed particle distribution in the fully swollen bead form.

Lewatit® NM 60 SG is specially prepared to provide a rapid rinse up to a resistivity of18+ megohm*cm, and to provide a rapid rinse in for Total Organic Carbon (TOC). **Lewatit® NM 60 SG** should provide +18 megohm*cm quality within 80 BV of rinse water, and < 3 ppb delta TOC within 50 BV of rinse water. **Lewatit® NM 60 SG** is designed to reliably provide UPW quality water for microelectronics, laboratory, one-through cartridges, and high purity service-exchange applications.

Lewatit® NM 60 SG is designed for non-regenerable application. The component resins can be separated, and regenerated and remixed, however, the treated water quality after user regeneration may not be of the same high purity as the virgin supplied resin.

The special properties of this product can only be fully utilized if the technolgy and process used correspond to the current state-of-the-art and the operating conditions are adapted to the individual requirements. Further advice in this matter can be obtained from Lanxess, Business Unit Liquid Purification Technologies (LPT)

General Description

Ionic form as shipped	H^+ / OH^-
Functional group	Sulfonic acid / quaternary amine
Matrix	Styrene / DVB
Structure	Gel
Appearance	Brown, translucent

Specified Data

		metric units	
Uniformity Coefficient		max.	1.6
Bead size	> 90 %	mm	0.3 - 1.25
Effective size		mm	0.40 - 0.65
Column Capacity	min. to 1 megohm*cm endpoint	eq/l	0.50 (0.02 MOhm*cm)

Physical and Chemical Properties

		metric units	
Bulk density	(+/- 5 %)	g/l	688
Density		approx. g/ml	1.10
Water retention		wt. %	50 - 60
Resistivity	min. megmohm*cm		18 (operation after 100 BV, mixed bed NaCl test)
Stability	at pH-range		0 - 14
Stability	temperature range	°C	1 - 60
Storability	temperature range	°C	4 - 24

Recommended Operating Conditions*

		metric units	
OPERATION			
Operating temperature		max. °C	60
Operating pH-range			0 - 14
Bed depth		min. mm	800
Pressure drop		max. kPa	200
Linear velocity	exhaustion	max. m/h	5 - 50
OTHER PARAMETERS			
Bed expansion	backwash (20 °C)	approx. % per m/h	4
Freeboard	backwash	vol. %	75 - 100
REGENERATION, MIXED BED			
Regenerant	type		HCl H_2SO_4 NaOH
Regenerant	quantity	approx. g/l	96 - 240
Regenerant	concentration	approx. wt. %	HCl 4 - 6 H_2SO_4 1.5 - 6 (progressive) NaOH 3 - 4
Linear velocity		m/h	1 - 10
RINSE, MIXED BED			
Linear velocity	rinsing	approx. m/h	2 - 8
Volumetric flow rate		approx. BV/h	8 - 48
Rinse water requirement	slow / fast	approx. BV	1 - 2 / 6 - 8

* 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.

** Regeneration progressive

** After regeneration the listed TOC and resistivity figures might not be achieved again.

*** 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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