

Lewatit® NM-91 is gel type, high capacity, high purity mixed ion exchange resin prepared with a unique volumetric ratio of 55% gel, strong acid cation resin, and 45% gel, Type 1 strong base anion resin.

Lewatit® NM-91 is specifically designed for water demineralization applications with high alkalinity or high FMA ratios, where complete removal of silica and CO₂ is not required.

The resin mixture is designed for non-regenerable application. It also can be used for demineralization of service water, waste water and water recovery in small units and once-through cartridges (DI water) for:

- » EDM recycling
- » alkaline feed demineralization
- » laboratories and photo laboratories
- » household appliances (e.g. steam irons, air humidifier)
- » small industrial plants (e.g. refilling of starter batteries or coolant circuits)
- » water for watering

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 Liquid Purification Technologies.

Common Description

Delivery form	H ⁺ /OH ⁻
Functional group	Quaternary amonium Typ1 /sulfonic acid
Matrix	Styrenic
Structure	Gel
Appearance	Dark brown / Yellow translucent

Specified Data

Uniformity coefficient		max.	1.9
Range of size for >90 vol% of all beads		mm	0.3-1.25
Mixed bed test (column capacity)	0,02 MOhm*cm endpoint	min. eq/L	0.3
Mixed bed test (polishing quality)	NaCl exhaustion	min. MOhm*cm	10

Typical Physical and Chemical Properties

Bulk density for shipment	(+/- 5%)	g/L	740
Density		approx. g/mL	1.2
Water retention (delivery form)		approx. weight %	50-60
Volume change (during exhaustion)		max. approx. %	-15
Stability pH range			0-14
Storage time (after delivery)		max. years	2
Storage temperature range		°C	-20 - +40

Operation

Operating temperature		max. °C	60
Operating pH range	during exhaustion		0-14
Bed depth for single column		min. mm	600
Specific pressure loss kPa*h/m ² (15°C)		kPa*h/m ² (15°C)	1.5
Max. pressure loss during operation		kPa	200
Specific flow rate		max. BV/h	50

This document contains important information and must be read in its entirety.

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.

Packaging

The experience has shown that the packaging stability for reliable resin containment is limited to 24 months under the storage conditions described above. It is therefore recommended to use the product within this time frame; otherwise the packaging condition should be checked regularly.

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