

**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 of 18+ 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 **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 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	H <sup>+</sup> / OH <sup>-</sup>
Functional group	Sulfonic acid / quaternary amine
Matrix	Styrene / DVB
Structure	Gel
Appearance	Brown, translucent

## Physical and Chemical Properties

		metric units	
Uniformity Coefficient*		max.	1.6
Bead size*		mm	0.3 - 1.25
Effective size		mm	0.50 (+/- 0.10)
Bulk density	(+/- 5 %)	g/l	688
Density		approx. g/ml	1.10
Water retention*		wt. %	60
Resistivity	min. megohm*cm		18
Column Capacity*	min. to 0.02 megohm*cm end point	eq/l	0.55
Stability	at pH-range		0 - 14
Stability	temperature range	°C	1 - 60
Storability	of the product	max. months	6
Storability	temperature range	°C	4 - 24

\* Specification values subjected to continuous monitoring.

### Recommended Operating Conditions\*

		metric units	
Operating temperature		max. °C	60
Operating pH-range			0 - 14
Bed depth		min. mm	800
Pressure drop		max. kPa	200
Pressure drop	psi/ft bed	max. kPa	see chart
Linear velocity	exhaustion	max. m/h	5 - 50
Linear velocity	backwash		see chart
Bed expansion	backwash (20 °C)	approx. % per m/h	4
Freeboard	% of bed depth	vol.-%	75 - 100
Volumetric flow rate		BV/h	8 - 48
Regenerant	type		Acid / NaOH
Regenerant	level	approx. g/l	96 - 240
Regenerant	concentration	approx. wt. %	1 - 6 / 3 - 4
Linear velocity	regeneration	m/h	1 - 10
Linear velocity	rinse, slow / fast	m/h	1 - 10 / 12 - 50
Volumetric flow rate	regeneration	BV/h	2 - 8
Volumetric flow rate	rinse, slow / fast	approx. BV/h	2 - 8 / 8 - 32
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

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### **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.

This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

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

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