

Lewatit® NM-60 is a highly regenerated mixed bed ion exchange resin consisting of a 1:1 chemically equivalent mixture of a type 1, strong base anion exchange resin and a strong acid cation exchange resin. **Lewatit® NM-60** is specially treated for high conversion and low TOC to meet the most exacting standards of high purity water industry.

Lewatit® NM-60 is especially suitable:

- » in mixed bed units for polishing after primary demineralization systems
- » in process industries
- » in electronic industries
- » in small industrial plants (e.g. refilling of starter batteries or coolant circuits)
- » for the removal of radioactive waste
- » in demineralization systems

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 | H ⁺ /OH ⁻ |
| Functional group | quaternary ammonium, type 1 /sulfonic acid |
| Matrix | styrenic |
| Structure | gel |
| Appearance | dark brown, yellow, translucent |

Specified Data

| | | | |
|------------------------------------|-----------------------|--------------|------|
| Uniformity coefficient | | max. | 1.8 |
| Mixed bed test (column capacity) | 0,02 MOhm*cm endpoint | min. eq/L | 0.55 |
| Mixed bed test (polishing quality) | NaCl exhaustion | min. MOhm*cm | 16 |

Typical Physical and Chemical Properties

| | | US Units | | Metric Units | |
|-----------------------------------|----------|--------------------|------|------------------|-----------|
| Bulk density for shipment | (+/- 5%) | lb/ft ³ | 43.0 | g/L | 690 |
| Density | | | | approx. g/mL | 1.1 |
| 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 |
| Storability temperature range | | | | °C | -20 - +40 |

Operation

| | | US Units | | Metric Units | |
|-------------------------------------|-------------------|--------------------------|------|----------------------|------|
| Operating temperature | | max. °F | 140 | max. °C | 60 |
| Operating pH range | during exhaustion | | | | 0-14 |
| Bed depth for single column | | min. inches | 23.6 | min. mm | 600 |
| Specific pressure loss (15°C) | | | | kPa*h/m ² | 1.5 |
| Max. pressure loss during operation | | PSI | 29 | kPa | 200 |
| Specific flow rate | | max. gpm/ft ³ | 6 | max. BV/h | 50 |

Regeneration

| | | US Units | | Metric Units | |
|---|---------------------|--------------------------|------|----------------|-------|
| HCl regeneration | concentration | approx. wt. % | | approx. wt. % | 4-6 |
| HCl regeneration | quantity co-current | min. lb/ft ³ | 6.3 | min. g/L resin | 100 |
| H ₂ SO ₄ regeneration | concentration | approx. wt. % | | approx. wt. % | 1.5-8 |
| H ₂ SO ₄ regeneration | quantity co-current | min. lb/ft ³ | 7.5 | min. g/L resin | 120 |
| NaOH regeneration | concentration | approx. wt. % | | approx. wt. % | 2-6 |
| NaOH regeneration | quantity co-current | min. lb/ft ³ | 6.3 | min. g/L resin | 100 |
| Regeneration contact time | | min. minutes | | min. minutes | 20 |
| Slow rinse at regeneration flow rate | | min. gal/ft ³ | 15.0 | min. BV | 2 |
| Fast rinse at service flow rate | | min. gal/ft ³ | 15.0 | min. BV | 2 |

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.

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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Note: The information contained in this publication is current as of the date of edition. Please contact LANXESS Corporation Inc. to determine if this publication has been revised.

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