

**Lewatit® MonoPlus MP 64** is a weakly basic, macroporous anion exchange resin with beads of uniform size (monodisperse) based on a styrene-divinylbenzene copolymer. The monodisperse beads are chemically and osmotically highly stable. The optimized kinetics lead to an increased operating capacity compared to ion exchange resins with heterodisperse bead size distribution.

**Lewatit® MonoPlus MP 64** is especially applicable for:

- » the demineralization of water for industrial steam generation in combination with strong basic ion exchangers like **Lewatit® MonoPlus M 500** especially recommended for Lewatit WS System
- » the treatment of electroplating rinse waters
- » the demineralization of water with a high concentration of humic acids and other organic substances to protect the strong basic anion exchanger from fouling

**Lewatit® MonoPlus MP 64** adds special features to the resin bed:

- » high exchange flow rates during regeneration and loading
- » an excellent utilization of the total capacity
- » a low demand for rinse water
- » homogenous throughput of regenerants, water and solutions; therefore an homogeneous working zone
- » a nearly linear pressure drop gradient for the whole bed depth; therefore an operation with higher bed depth possible

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    | Free base/Cl <sup>-</sup>              |
| Functional group | Tertiary amine/<br>quaternary ammonium |
| Matrix           | Styrenic                               |
| Structure        | Macroporous                            |
| Appearance       | Beige, opaque                          |

## Specified Data

|                                |     |           |                |
|--------------------------------|-----|-----------|----------------|
| Uniformity coefficient         |     | max.      | 1.1            |
| Mean bead size                 | d50 | mm        | 0.59 (+/-0.05) |
| Total capacity (delivery form) |     | min. eq/L | 1.3            |

## Typical Physical and Chemical Properties

|                                                                |          |                  |           |
|----------------------------------------------------------------|----------|------------------|-----------|
| Bulk density for shipment                                      | (+/- 5%) | g/L              | 620       |
| Density                                                        |          | approx. g/mL     | 1.04      |
| Water retention (delivery form)                                |          | approx. weight % | 61-66     |
| Volume change (free base / Cl <sup>-</sup> - Cl <sup>-</sup> ) |          | max. approx. %   | 24        |
| Stability pH range                                             |          |                  | 0-14      |
| Storage time (after delivery)                                  |          | max. years       | 2         |
| Storage temperature range                                      |          | °C               | -20 - +40 |

## Operation

|                                                    |                   |                             |     |
|----------------------------------------------------|-------------------|-----------------------------|-----|
| Operating temperature                              |                   | max. °C                     | 70  |
| Operating pH range                                 | during exhaustion |                             | 0-8 |
| Bed depth for single column                        |                   | min. mm                     | 800 |
| Back wash bed expansion per m/h (20°C)             |                   | %                           | 21  |
| Specific pressure loss kPa*h/m <sup>2</sup> (15°C) |                   | kPa*h/m <sup>2</sup> (15°C) | 1   |
| Max. pressure loss during operation                |                   | kPa                         | 300 |
| Specific flow rate                                 |                   | max. BV/h                   | 40  |

## Regeneration

|                                      |                          |                |     |
|--------------------------------------|--------------------------|----------------|-----|
| NaOH regeneration                    | concentration            | approx. wt. %  | 2-6 |
| NaOH regeneration                    | quantity co-current      | min. g/L resin | 80  |
| NaOH regeneration                    | quantity counter-current | min. g/L resin | 50  |
| Regeneration contact time            |                          | min. minutes   | 30  |
| Slow rinse at regeneration flow rate |                          | min. BV        | 2   |
| Fast rinse at service flow rate      |                          | min. BV        | 4   |

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



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