

For the demineralization of water in the production of ultra pure water

**Lewatit® UltraPure 1261 MD** is a macroporous, strongly basic anion exchange resin (SBA, type I) with a monodispersed bead size distribution (uniform particles) based on a styrene-divinylbenzene copolymer for the use in WS/VWS systems for the production of ultra pure water.

The monodisperse beads (uniformity coefficient: max. 1.1) are chemically and osmotically highly stable. The optimized kinetics lead to an increased operating capacity, and the very low content of fines also results in a low pressure drop compared to ion exchange resins with heterodisperse bead size distribution.

For the production of ultra pure water, leaching of organics from **Lewatit® UltraPure 1261 MD** into the treated water is reduced to a level less than **50 ppb**. Hence, **Lewatit® UltraPure 1261 MD** is specially recommended for the demineralization of water to generate ultra pure quality.

Die besonderen Eigenschaften dieses Produktes lassen sich nur dann optimal nutzen, wenn Verfahren und Filterkonstruktion dem Stand der Technik entsprechen und die Betriebsbedingungen auf die individuellen Bedürfnisse abgestimmt sind. Zur weiteren Beratung steht Ihnen in der BU Liquid Purification Technologies (LPT) ein Team von Spezialisten zur Verfügung.

## Common Description

|                  |                          |
|------------------|--------------------------|
| Delivery form    | Cl <sup>-</sup>          |
| Functional group | Quaternary amine, type I |
| Matrix           | Crosslinked polystyrene  |
| Structure        | Macroporous              |
| Appearance       | Beige, opaque            |

## Specified Data

|                        |                                  | metric units |                 |
|------------------------|----------------------------------|--------------|-----------------|
| Uniformity coefficient |                                  | max.         | 1.1             |
| Mean bead size         |                                  | microns      | 0.65 (+/- 0.05) |
| Specific resistivity   | ca. 80 BV, as a single component | min. MOhm*cm | 4.0             |
| Ultra pure water test  | delta TOC                        | max. ppb     | 50              |
| Total capacity         |                                  | min. eq/l    | 1.1             |

## Typical Physical and Chemical Properties

|                 |                           | Metrische Einheiten |           |
|-----------------|---------------------------|---------------------|-----------|
| Bulk density    | (+/- 5 %)                 | g/L                 | 640       |
| Density         |                           | approx. g/ml        | 1.06      |
| Water retention |                           | wt. %               | 60 - 65   |
| Bed expansion   | at 20°C, per m/h          | vol. %              | 0 - 14    |
| Storability     | of the product            | max. years          | 12        |
| Storability     | of the product, at < 25°C | max. months         | -20 - +40 |

## Recommended Start-up Conditions\*

|                               |                               | metric units                 |         |
|-------------------------------|-------------------------------|------------------------------|---------|
| OPERATION                     |                               |                              |         |
| Operating temperature         |                               | max. °C                      | 40      |
| Operating pH-range            |                               |                              | 0 - 12  |
| Bed depth                     |                               | min. mm                      | 800     |
| Specific pressure drop        | (15 °C)                       | approx. kPa*h/m <sup>2</sup> | 0.8     |
| Pressure drop                 |                               | max. kPa                     | 300     |
| Linear velocity               | Operation                     | max. m/h                     | 60      |
|                               |                               |                              |         |
| REGENERATION, COUNTER-CURRENT |                               |                              |         |
| Regenerant                    | Type                          |                              | NaOH    |
| Regenerant                    | Quantity                      | approx. g/L                  | 50      |
| Regenerant                    | Concentration                 | approx. wt. %                | 2 - 4   |
| Linear velocity               | Regeneration                  | approx. m/h                  | 5       |
| Rinse water requirement       | slow / fast                   | approx. BV                   | 2.5     |
|                               |                               |                              |         |
| REGENERATION, CO-CURRENT      |                               |                              |         |
| Regenerant                    | Type                          |                              | NaOH    |
| Regenerant                    | Quantity                      | approx. g/L                  | 100     |
| Regenerant                    | Concentration                 | approx. wt. %                | 3 - 5   |
| Linear velocity               |                               | approx. m/h                  | 5       |
| Linear velocity               | Backwash (20 °C)              | approx. m/h                  | 5       |
| Linear velocity               | Rinsing                       | approx. m/h                  | 5       |
| Rinse water requirement       | slow / fast                   | approx. BV                   | 2.5 / 8 |
| Bed expansion                 | (20 °C, per m/h)              | approx. vol. %               | 18      |
| Freeboard                     | Backwash<br>(extern / intern) | vol. %                       | 100     |

\* 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.

## 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.

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



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