

Lewatit® MonoPlus S 200 H is a strongly acidic, gelular cation exchange resin with beads of uniform size (monodisperse) based on a styrene-divinylbenzene copolymer, in fully regenerated form. Due to a special manufacturing process this resin type is extremely resistant to chemical, osmotic and mechanical stress.

Lewatit® MonoPlus S 200 H is especially suitable for:

- » the demineralization of water for industrial steam generation operated with co-current or modern counter-current systems like e.g. Lewatit WS System, Lewatit Liftbed System or Lewatit Rinsebed System
- » polishing using the Lewatit Multistep System or a conventional mixed bed
- » arrangements in combination with the following anion components: **Lewatit® MonoPlus M 800** and **Lewatit® MonoPlus M 800 OH**.

Lewatit® MonoPlus S 200 H adds special features to the resin bed:

- » high flow rates during regeneration and loading
- » high operating capacity at low regenerant consumption
- » low rinse water requirement
- » homogeneous throughput of regenerants, water and solutions, resulting in a homogeneous operating zone
- » low TOC emission and high resistance to oxidative stress
- » good separation of the components in mixed bed applications.

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 ⁺ |
| Functional group | Sulfonic acid |
| Matrix | Styrenic |
| Structure | Gel |
| Appearance | Dark brown |

Specified Data

| | | | |
|--------------------------------|-----|-----------|---------------|
| Uniformity coefficient | | max. | 1.1 |
| Mean bead size | d50 | mm | 0.60 (+-0.05) |
| Total capacity (delivery form) | | min. eq/L | 2.1 |

Typical Physical and Chemical Properties

| | | | |
|---|----------|------------------|-----------|
| Bulk density for shipment | (+/- 5%) | g/L | 790 |
| Density | | approx. g/mL | 1.23 |
| Water retention (delivery form) | | approx. weight % | 45-50 |
| Volume change (H ⁺ - Na ⁺) | | max. approx. % | -8 |
| Stability pH range | | | 0-14 |
| Storage time (after delivery) | | max. years | 1 |
| Storage temperature range | | °C | -20 - +40 |
| Ionic conversion H ⁺ | | min. eq. % | 99.9 |

Operation

| | | | |
|--|-------------------|-----------------------------|------|
| Operating temperature | | max. °C | 140 |
| Operating pH range | during exhaustion | | 2-14 |
| Bed depth for single column | | min. mm | 800 |
| Bed depth per component in mixed bed | | min. mm | 500 |
| Back wash bed expansion per m/h (20°C) | | % | 3.5 |
| Specific pressure loss kPa*h/m ² (15°C) | | kPa*h/m ² (15°C) | 1 |
| Max. pressure loss during operation | | kPa | 250 |
| Specific flow rate | | max. BV/h | 100 |

Regeneration

| | | | |
|---|--------------------------|----------------|-------|
| HCl regeneration | concentration | approx. wt. % | 4-6 |
| HCl regeneration | quantity co-current | min. g/L resin | 100 |
| HCl regeneration | quantity counter-current | min. g/L resin | 55 |
| H ₂ SO ₄ regeneration | concentration | approx. wt. % | 1.5-8 |
| H ₂ SO ₄ regeneration | quantity co-current | min. g/L resin | 120 |
| H ₂ SO ₄ regeneration | quantity counter-current | min. g/L resin | 80 |
| Regeneration contact time | | min. minutes | 20 |
| Slow rinse at regeneration flow rate | | min. BV | 2 |
| Fast rinse at service flow rate | | min. BV | 2 |

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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