

Lewatit® A 8073 is a medium basic (bifunctional), gelular anion exchange resin based on an acrylic-divinylbenzene copolymer a special bead size distribution.

Due to its acrylic structure **Lewatit® A 8073** stands for effective adsorption and desorption of naturally occurring organic substances (high resistance to organic fouling). Its very high total capacity and outstanding mechanical stability together with the excellent resistance to osmotic shock makes it unique for demineralization of water with a relatively high content of Free Mineral Acidity (FMA) and moderate ratio of weakly dissociated ions (SiO_2 , CO_2).

Lewatit® A 8073 is especially suitable for the following applications:

- 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
- Removal of organic matter, especially from surface water
- Arrangements with decarbonator for demineralization plants
- Arrangements without a weakly dissociated anion exchanger for demineralization plants

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 |
| Functional group | tertiary amine/ quaternary ammonium |
| Matrix | acrylic |
| Structure | gel |
| Appearance | ivory, opaque |

Specified Data

| | | | |
|--------------------------------|-----|-----------|-------------|
| Uniformity coefficient | | max. | 1.8 |
| Effective size | d10 | mm | 0.50 - 0.75 |
| Total capacity (delivery form) | | min. eq/L | 1.25 |

Typical Physical and Chemical Properties

| | | | |
|----------------------------------------------------------------|----------|------------------|-----------|
| Bulk density for shipment | (+/- 5%) | g/L | 710 |
| Density | | approx. g/mL | 1.06 |
| Water retention (delivery form) | | approx. weight % | 56-64 |
| Volume change (free base / Cl ⁻ - Cl ⁻) | | max. approx. % | 14 |
| Stability pH range | | | 0-14 |
| Storage time (after delivery) | | max. years | 2 |
| Storage temperature range | | °C | -20 - +40 |

Operation

| | | | |
|----------------------------------------------------|-------------------|-----------------------------|------|
| Operating temperature | | max. °C | 35 |
| Operating pH range | during exhaustion | | 0-12 |
| Bed depth for single column | | min. mm | 800 |
| Back wash bed expansion per m/h (20°C) | | % | 12 |
| Specific pressure loss kPa*h/m ² (15°C) | | kPa*h/m ² (15°C) | 1.1 |
| Max. pressure loss during operation | | kPa | 150 |
| Specific flow rate | | max. BV/h | 50 |

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 | 3 |
| Fast rinse at service flow rate | | min. BV | 5 |

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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