

Lewatit® K 3433 is a weakly basic, macroporous, palladium-doped, polymer-based resin in spherical bead form. It is designed to catalytically remove dissolved oxygen from water. A suitable reducing agent such as hydrogen is dissolved in the water to be treated and then passed through a bed of the catalyst.

By this method, residual oxygen concentrations of less than 20 ppb can be obtained at flow rates up to 80 BV/h and temperatures up to 120 °C.

Lewatit® K 3433 is designed for the following applications:

- Removal of dissolved oxygen from water for drinks production
- Removal of dissolved oxygen from sea water used in offshore oilfield injection
- Oxygen elimination from boiler feed water and heating circuits

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/ Pd |
| Functional group | tertiary amine |
| Matrix | styrenic |
| Structure | macroporous |
| Appearance | grey, opaque |

Specified Data

| | | | |
|---|-----|------|-----------|
| Uniformity coefficient | | max. | 1.6 |
| Range of size for >90 vol% of all beads | | mm | 0.40-1.25 |
| Effective size | d10 | mm | 0.50-0.60 |

Typical Physical and Chemical Properties

| | | | |
|---------------------------------|----------|------------------|-----------|
| Bulk density for shipment | (+/- 5%) | g/L | 630 |
| Density | | approx. g/mL | 1.02 |
| Water retention (delivery form) | | approx. weight % | 51-56 |
| Stability pH range | | | 5-14 |
| Stability temperature range | | °C | 1-120 |
| Storage temperature range | | °C | -20 - +40 |

Operation

| | | | |
|--|-------------------|-----------------------------|------|
| Operating pH range | during exhaustion | | 5-14 |
| Bed depth for single column | | min. mm | 800 |
| Back wash bed expansion per m/h (20°C) | | % | 30 |
| Specific pressure loss kPa*h/m ² (15°C) | | kPa*h/m ² (15°C) | 1.1 |
| Max. pressure loss during operation | | kPa | 250 |
| Specific flow rate | | max. BV/h | 80 |

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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