

## PRODUCT INFORMATION LEWATIT® MDS 1368 Ca 320



**Lewatit® MDS 1368 Ca 320** is a Food grade, strongly acidic, gelular cation exchange resin based on a styrene/divinylbenzene-copolymer.

**Lewatit® MDS 1368 Ca 320** is a bead-shaped monodisperse resin. Due to its fine bead size it is specially suitable for chromatographic separation processes, e.g.

- separation of glucose and fructose

When using **Lewatit® MDS 1368 Ca 320** to treat potable water and the aqueous solutions listed above, special care should be given to the initial cycles of the new resin. Please refer to the recommended start-up conditions available on request.

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 Ion Exchange Resins.

## General Description

|                       |                          |
|-----------------------|--------------------------|
| Ionic form as shipped | Ca <sup>2+</sup>         |
| Functional group      | sulfonic acid            |
| Matrix                | crosslinked polystyrene  |
| Structure             | gel-type                 |
| Appearance            | light brown, translucent |

## Physical and Chemical Properties

|                         |                                     | metric units |                |
|-------------------------|-------------------------------------|--------------|----------------|
| Uniformity Coefficient* |                                     | max.         | 1.1            |
| Mean bead size*         |                                     | mm           | 0.30 - 0.33    |
| Bulk density            | (+/- 5 %)                           | g/l          | 850            |
| Density                 |                                     | approx. g/ml | 1.28           |
| Water retention         |                                     | wt. %        | 46 - 51        |
| Total capacity*         |                                     | min. eq/l    | 1.8            |
| Volume change           | Ca <sup>2+</sup> --> H <sup>+</sup> | max. vol. %  | 15             |
| Stability               | at pH-range                         |              | 0 - 14         |
| Stability               | temperature range                   | °C           | - - 12<br>20 0 |
| Storability             | of the product                      | max. years   | 2              |
| Storability             | temperature range                   | °C           | - - 40<br>20   |

\* Specification values subjected to continuous monitoring.

## Recommended Operating Conditions\*

|                        | <b>metric units</b>                   |          |
|------------------------|---------------------------------------|----------|
| Operating temperature  | max. °C                               | 100      |
| Operating pH-range     |                                       | 0 - 14   |
| Bed depth              | min. mm                               | 800      |
| Specific pressure drop | at viscosity 1 mPa*s approx. kPa*h/m² | 4        |
| Pressure drop          | max. kPa                              | 200      |
| Linear velocity        | backwash (20 °C) approx. m/h          | 7        |
| Bed expansion          | (20 °C, per m/h) approx. vol. %       | 15       |
| Freeboard              | backwash vol. %<br>(extern / intern)  | 80 - 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

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### **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.

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