

Lewatit® MonoPlus C 249 NS is a food grade, strongly acidic cation exchange resin with beads of uniform size (monodisperse) based on a styrene-divinylbenzene copolymer. **Lewatit® MonoPlus C 249 NS** is manufactured without the use of solvent.

The monodisperse beads are chemically and osmotically very stable, and they can effectively be disinfected for the drinking water processing. The optimized kinetics lead to an increased operating capacity compared to ion exchange resins with heterodisperse bead size distribution.

Lewatit® MonoPlus C 249 NS is especially applicable for:

- » softening in special systems with regular disinfection
- » softening of drinking water

Lewatit® MonoPlus C 249 NS is adding special features to the resin bed:

- » high exchange flow rates during regeneration and loading
- » a good utilization of the total capacity
- » a low demand for rinse water
- » homogeneous throughput of regenerants, water and solutions; therefore a homogeneous working zone
- » nearly linear pressure drop gradient for the whole bed depth; therefore operation with higher bed depth is possible

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 Corporation.

PRODUCT INFORMATION

LEWATIT® MonoPlus C 249 NS



Common Description

| | |
|------------------|-----------------|
| Delivery form | Na ⁺ |
| Functional group | sulfonic acid |
| Matrix | styrenic |
| Structure | gel |
| Appearance | dark brown |

Specified Data

| | | US Units | | | |
|--------------------------------|-----|---------------------|------|-----------|---------------|
| Uniformity coefficient | | | | max. | 1.1 |
| Mean bead size | d50 | | | mm | 0.60 (+-0.05) |
| Total capacity (delivery form) | | kgr/ft ³ | 43.7 | min. eq/L | 1.8 |

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

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Typical Physical and Chemical Properties

| | | US Units | | Metric Units | |
|---------------------------------|----------|--------------------|------|------------------|-----------|
| Bulk density for shipment | (+/- 5%) | lb/ft ³ | 50.6 | g/L | 810 |
| Density | | | | approx. g/mL | 1.28 |
| Water retention (delivery form) | | | | approx. weight % | 44-50 |
| Stability pH range | | | | | 0-14 |
| Storage time (after delivery) | | | | max. years | 2 |
| Storability temperature range | | | | °C | -20 - +40 |

Operation

| | | US Units | | Metric Units | |
|--|-------------------|--------------------------|------|----------------------|-----|
| Operating temperature | | max. °F | 248 | max. °C | 120 |
| Operating pH range | during exhaustion | | | | 5-8 |
| Bed depth for single column | | min. inches | 31.5 | min. mm | 800 |
| Back wash bed expansion per m/h (20°C) | | | | % | 4 |
| Specific pressure loss (15°C) | | | | kPa*h/m ² | 1 |
| Max. pressure loss during operation | | PSI | 29 | kPa | 200 |
| Specific flow rate | | max. gpm/ft ³ | 5 | max. BV/h | 40 |

Regeneration

| | | US Units | | Metric Units | |
|--------------------------------------|--------------------------|--------------------------|------|----------------|------|
| NaCl regeneration | concentration | approx. wt. % | | approx. wt. % | 8-12 |
| NaCl regeneration | quantity co-current | min. lb/ft ³ | 6.3 | min. g/L resin | 100 |
| NaCl regeneration | quantity counter-current | min. lb/ft ³ | | min. g/L resin | 70 |
| Regeneration contact time | | min. minutes | | min. minutes | 20 |
| Slow rinse at regeneration flow rate | | min. gal/ft ³ | 15.0 | min. BV | 2 |
| Fast rinse at service flow rate | | min. gal/ft ³ | 15.0 | min. BV | 2 |

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.

PRODUCT INFORMATION

LEWATIT® MonoPlus C 249 NS



The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and application. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change with notice. It is expressly understood and agreed that you assume and hereby expressly release us from liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

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Note: The information contained in this publication is current as of the date of edition. Please contact LANXESS Corporation Inc. to determine if this publication has been revised.

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