

Lewatit® S 7968 is a Food grade, macroporous adsorber resin without functional groups. It has beads of a uniform size (monodisperse).

It can be used in the extraction / purification of natural or synthetic organic products in the food industry.

In addition, it can be used for the adsorption / removal of:

- anionic, cationic and nonionic surfactants
- chlorinated and nitrated hydrocarbons
- colorants or inert organic materials
- for removing of non-polar organic ingredients of low molecular mass from landfill leachates
- for debittering of fruit juices

Lewatit® S 7968 has the following properties:

- very good mechanical stability and low attrition
- longer resin life time and better regeneration efficiency compared to activated carbon
- high adsorption capacity especially at medium and high feed concentration
- good kinetic performance during adsorption and elution

Prior to industrial application, preliminary tests should be carried out on a laboratory scale, in order to determine the maximum adsorptive capacity and the optimum regenerant. Experience has shown that the maximum capacity of the adsorber resin is reached after the third cycle.

When using **Lewatit® S 7968** 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.

Lewatit® S 7968 is stored and delivered in a concentrated NaCl brine to avoid biogrowth. Please wash the resin with demin. water before use.

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® S 7968



Common Description

| | |
|------------------|---------------|
| Delivery form | Neutral |
| Functional group | None |
| Matrix | Styrenic |
| Structure | Macroporous |
| Appearance | White, opaque |

Specified Data

| | | US Units | | | |
|------------------------|-----|----------|--|------|-----------|
| Uniformity coefficient | | | | max. | 1.1 |
| Mean bead size | d50 | | | mm | 0.44-0.54 |

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/ft³ | 37.5 | g/L | 600 |
| Density | | | | approx. g/mL | 1.0 |
| Water retention (delivery form) | | | | approx. weight % | 54-63 |
| Stability pH range | | | | | 0-14 |
| Stability temperature range | | | | °C | 1-120 |
| Storage time (after delivery) | | | | max. years | 2 |
| Storability temperature range | | | | °C | -20 - +40 |
| Surface BET | | | | approx. m²/g | 800 |
| Pore volume | | | | approx. cm³/g | 1.2 |
| Pore diameter | | | | approx. nm | 5-10 |

Operation

| | | US Units | | Metric Units | |
|--|-------------------|--------------|------|--------------|------|
| Operating temperature | | max. °F | 248 | max. °C | 120 |
| Operating pH range | during exhaustion | | | | 0-14 |
| Bed depth for single column | | min. inches | 39.4 | min. mm | 1000 |
| Back wash bed expansion per m/h (20°C) | | | | % | 45 |
| Specific pressure loss (15°C) | | | | kPa*h/m² | 1.5 |
| Max. pressure loss during operation | | PSI | 36 | kPa | 250 |
| Specific flow rate | | max. gpm/ft³ | 0.63 | max. BV/h | 5 |

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Regeneration

| | | US Units | | Metric Units | |
|---|--------------------------|--------------------------|-------|----------------|-------|
| HCl regeneration | concentration | approx. wt. % | 4-6 | approx. wt. % | 4-6 |
| HCl regeneration | quantity co-current | min. lb/ft ³ | 6.3 | min. g/L resin | 100 |
| HCl regeneration | quantity counter-current | min. lb/ft ³ | 4.1 | min. g/L resin | 55-65 |
| H ₂ SO ₄ regeneration | concentration | approx. wt. % | 1.5-3 | approx. wt. % | 1.5-3 |
| H ₂ SO ₄ regeneration | quantity co-current | min. lb/ft ³ | 9.4 | min. g/L resin | 150 |
| H ₂ SO ₄ regeneration | quantity counter-current | min. lb/ft ³ | 5.0 | min. g/L resin | 80 |
| NaOH regeneration | concentration | approx. wt. % | 2-6 | approx. wt. % | 2-6 |
| NaOH regeneration | quantity co-current | min. lb/ft ³ | 6.3 | min. g/L resin | 100 |
| NaOH regeneration | quantity counter-current | min. lb/ft ³ | 3.8 | min. g/L resin | 60 |
| Regeneration contact time | | min. minutes | 20 | min. minutes | 30 |
| 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 | 29.9 | min. BV | 4 |

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Additional Information & Regulations

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE OF PRODUCTS MENTIONED HEREIN IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING ANY PRODUCT, ALWAYS READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION.

Safety precautions

Strong oxidants, e.g. nitric acid, can cause violent reactions if they come into contact with ion exchange resins.

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 conditions

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.

Storage time

The recommended storage time for this product is explained in the technical document "Technical guidelines on the storage of Lewatit® ion exchange resins" available for download on our website. Please use the following link for more information: <https://lanxess.com/en/products-and-brands/brands/lewatit/literature>

Packaging

The experience has shown that the packaging stability for reliable resin containment is limited to 24 months under the storage conditions described within the product safety information. It is therefore recommended to use the product within this time frame; otherwise the packaging condition should be checked regularly.

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