

Lewatit® C 249 is a premium grade, standard cross-linked, gel, strong acid cation exchange resin based on a styrene / DVB polymer and is especially suited for industrial water treatment applications, including demineralization and softening. **Lewatit® C 249** can be used in single bed and mixed bed applications.

Lewatit® C 249 exhibits a high ion exchange capacity combined with excellent mechanical and osmotic strength for a long operating life and is supplied in a heterodispersed particle size distribution in the sodium form. It shows a minimum amount of fines resulting in low pressure losses during service.

Lewatit® C 249 is supplied in the sodium form. **Lewatit® C 249** is also available in the hydrogen form, designated as **Lewatit® C 267**.

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	Na ⁺
Functional group	Sulfonic acid
Matrix	Styrenic
Structure	Gel
Appearance	Brown, black

Specified Data

Uniformity coefficient		max.	1.6
Range of size for >90 vol% of all beads		mm	0.4 -1.25
Effective size	d10	mm	0.50 (+-0.06)
Total capacity (delivery form)		min. eq/L	2.0

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

Typical Physical and Chemical Properties

Bulk density for shipment	(+/- 5%)	g/L	830
Density		approx. g/mL	1.26
Water retention (delivery form)		approx. weight %	45-48
Volume change (Na ⁺ - H ⁺)		max. approx. %	10
Stability pH range			0-14
Storage time (after delivery)		max. years	2
Storage temperature range		°C	-20 - +40

Operation

Operating temperature		max. °C	140
Operating pH range	during exhaustion		2-14
Bed depth for single column		min. mm	800
Back wash bed expansion per m/h (20°C)		%	4.5
Specific pressure loss kPa*h/m ² (15°C)		kPa*h/m ² (15°C)	1
Max. pressure loss during operation		kPa	150
Specific flow rate		max. BV/h	50

Regeneration

HCl regeneration	concentration	approx. wt. %	4-6
HCl regeneration	quantity co-current	min. g/L resin	100
HCl regeneration	quantity counter-current	min. g/L resin	55
H ₂ SO ₄ regeneration	concentration	approx. wt. %	1.5-8
H ₂ SO ₄ regeneration	quantity co-current	min. g/L resin	120
H ₂ SO ₄ regeneration	quantity counter-current	min. g/L resin	80
Regeneration contact time		min. minutes	20
Slow rinse at regeneration flow rate		min. BV	2
Fast rinse at service flow rate		min. BV	2

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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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