

Lewatit® C 249 is a premium grade, standard cross-linked, gel, strong acid cation exchange resin based on a styrene / DVB polymer. **Lewatit® C 249** is especially suited for industrial water treatment applications, including demineralization, service exchange, 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. **Lewatit® C 249** is supplied in a heterodispersed particle size distribution as spherical beads in the fully swollen moist sodium form. **Lewatit® C 249** is prepared with a minimum amount of fines (-50 mesh particles) 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 Ion Exchange Resins.

General Description

Ionic form as shipped	Na ⁺
Functional group	Sulfonic acid
Matrix	DVB / Styrene
Structure	Gel
Appearance	Brown, translucent

Physical and Chemical Properties

		metric units	
Uniformity Coefficient*		max.	1.6
Bead size*	> 90 %	mm	0.4 - 1.25
Effective size		mm	0.50 (+/- 0.06)
Bulk density	(+/- 5 %)	g/l	832
Density		approx. g/ml	1.26
Water retention		wt. %	45 - 48
Total capacity*		min. eq/l	2.0
Volume change	Na ⁺ --> H ⁺	max. vol. %	7
Stability	at pH-range		0 - 14
Stability	temperature range	°C	1 - 140
Storability	of the product	max. years	2
Storability	temperature range	°C	-20 / 40

* Specification values subjected to continuous monitoring.

Recommended Operating Conditions*

		metric units	
Operating temperature		max. °C	140
Operating pH-range			0 - 14
Bed depth		min. mm	800
Pressure drop	15 °C	max. kPa	280
Linear velocity	exhaustion	max. m/h	5 - 50
Bed expansion	backwash (20 °C)	approx. % per m/h	4
Freeboard	backwash	vol. %	65 - 75
Volumetric flow rate	exhaustion	BV/h	8 - 48
Regenerant	type		NaCl / KCl
Regenerant	level	approx. g/l	64 - 320
Regenerant	concentration	approx. wt. %	8 - 13
Linear velocity	regeneration	m/h	1 - 10
Linear velocity	rinse, slow / fast	m/h	1 - 10 / 5 - 50
Volumetric flow rate	regeneration	BV/h	4 - 12
Volumetric flow rate	rinse, slow / fast	approx. BV/h	2.5 - 8 / 8 - 48
Rinse water requirement	slow / fast	approx. BV	1 - 2 / 2 - 5
Regenerant	type		HCl / H ₂ SO ₄
Regenerant	level	approx. g/l	48 - 320
Regenerant	concentration	approx. wt. %	0.5 - 6
Linear velocity	regeneration	m/h	1 - 10
Linear velocity	rinse, slow / fast	m/h	1 - 10 / 5 - 50
Volumetric flow rate	regeneration	BV/h	4 - 12
Volumetric flow rate	rinse, slow / fast	approx. BV/h	2.5 - 8 / 8 - 48
Rinse water requirement	slow / fast		1 - 2 / 2 - 5

* 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

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.

This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

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

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