

# LEWATIT<sup>®</sup> CNP C

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## Product Information

**CNP C** is a weakly acidic, macroporous cation exchange resin based on crosslinked polyacrylate. It is bead-shaped and has a special bead size distribution for use in household filter systems and technical drinking water plants.

On account of its high total capacity, excellent mechanical and chemical stability and osmotic properties, in the hydrogen form **CNP C** is suitable for

- decarbonisation and softening of drinking water, e.g. brewery water treatment, and the use in household filter systems.

Since it has a low regenerant requirement, **CNP C** is a particularly economical product for the decarbonisation of drinking water and liquids which are used as foodstuffs or in the production of foodstuffs.

**CNP C** complies with current German legislation on food and food-contact uses.

**CNP C** is in compliance with the European Resolution AP(97)-1 with the regard to Total Organic Carbon (TOC) release according the AFNOR Test (method T90-601).

When using **CNP C** 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 in this data sheet.

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 Bayer AG, Business Group Specialty Products, Business Unit Ion Exchange Resins and Water Chemicals.

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## General Description

Ionic form as, as shipped	H+
Functional group	carboxylic acid
Matrix	crosslinked polyacrylate
Structure	macroporous
Appearance	yellow, opaque

## Physical and Chemical Properties

Bead size*	> 90%	mm	0.4 - 1.6
Effective size*		mm	0.48 (+/- 0.05)
Uniformity coefficient*		max.	1.8
Bulk density	(+/- 5%)	g/l	720
Density		approx. g/l	1.18
Water retention		%	50 - 55
Total capacity*		min. eq/l	4.3
Volume change	H+ -> Ca <sup>2+</sup>	max. %	7
Stability	at pH-range		0 - 14
Storability	of the product	min. months	6
Storability	at temperature	°C	-20 - 40
Standard packaging	190-l-Fibredrum		

\* These data are specification values and are subject to continuous monitoring.

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## Recommended Operating Conditions\*

Operating temperature	max. °C	70
Operating pH range		5 - 14
Bed depth	min. mm	800
Specific pressure loss	at viscosity 1 mPa approx. kPa*h/m <sup>2</sup>	1.3
Max. pressure loss	kPa	250
Linear velocity	exhaustion max. m/h	-
Linear velocity	backwash (20 °C) approx. m/h	12 - 14
Regenerant		HCL H2SO4
Countercurrent regeneration level	approx. g/l	70 90
Countercurrent regeneration concentration	%	3 - 6 0.5 - 0.8
Linear velocity	regeneration approx. m/h	5 - 20
Linear velocity	rinsing approx. m/h	5 - 20
Rinse water requirement	approx. BV	3.5
Bed expansion	(20°C, per m/h) approx. %	5
Freeboard	as % of resin volume %	60 - 80

## Recommended Start-up Conditions\*

(in drinking water applications only)

Rinsing	DI-water	
Linear velocity	approx. m/h	5 - 8
Rinse water requirement	approx. BV	20
Temp. of rinse water	Operating temperature	
Regeneration	with the double normal quantity	
Rinsing	with the double normal quantity	

\* The recommend 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 are to be found in our Technical Information Sheets.

\*\* progressive Regeneration

\*\*\* 100m/h for polishing



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## Safety precautions

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

## Toxicity

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The safety data sheet must be observed. It contains additional data on product description, transport, storage, handling, safety and ecology.

## Disposal

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A proprietary technical recycling process for used ion exchanger is unknown to us. In the European Community the following possibilities for disposal can be utilized.

Resins used for water treatment and in the sugar industry can be disposed under code number 190 905. Our preference is to recommend disposal in an industrial incinerator.

Ion exchange resins which contain impurities after use in industrial processes, e.g. electroplating, chemicals treatment etc., can be disposed under code number 190 806. A certificate of disposal is required.

Bayer AG  
BG Specialty Products  
BU Ion Exchange Resins and Water Chemicals  
D-51368 Leverkusen

Internet: <http://www.lewatit.com>

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