

Lewatit® VP OC 1064 MD PH is a macroporous adsorber resin without functional groups. It has a very good chemical and mechanical stability and beads of uniform size (monodisperse). It can be used in the:

Extraction / Purification of:

- » natural or synthetic organic products in the chemical or pharmaceutical industry

Adsorption / Removal of:

- » anionic, cationic and nonionic surfactants
- » chlorinated and nitrated hydrocarbons
- » colorants or inert organic materials
- » residual concentrations of liquid-liquid extractants, e.g. tributylphosphate and di-2-ethylhexylphosphate in the recycling of effluents, treatment of solutions of organic chemical products and purification of industrial effluents
- » removal of non-polar organic ingredients of low molecular mass from landfill leachates

Lewatit® VP OC 1064 MD PH 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 end-capacity of the adsorber resin is reached after the third cycle.

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	neutral
Functional group	none
Matrix	crosslinked polystyrene
Structure	porous beads
Appearance	white, opaque

Physical and Chemical Properties

		metric units		
Uniformity Coefficient*		max.	1.1	
Mean bead size*		mm	0.44	0.54
Bulk weight	(+/- 5%)	g/l	600	
Density		approx. g/ml	1.02	
Water retention		wt. %	50	60
Surface area	BET	approx. m ² /g	800	
Pore volume		approx. cm ³ /g	1.2	
Pore diameter	average	nm	5	10
Stability	at pH-range		0	14
Stability	temperature range	°C	-20	120
Storability	of the product	max. years		
Storability	temperature range	°C	-20	40

* Specification values subjected to continuous monitoring.

Recommended Operating Conditions*

		metric units	
Operating temperature		max. °C	120
Operating pH-range			1 - 14
Bed depth		min. mm	1000
Specific pressure drop	(15 °C)	approx. kPa*h/m ²	1.5
Pressure drop		max. kPa	250
Linear velocity	operation	max. m/h	20
Linear velocity	backwash (20 °C)	approx. m/h	1 - 5
Bed expansion	(20 °C, per m/h)	approx. vol. %	80 - 100 **
Freeboard	backwash (extern / intern)	vol. %	100
Regenerant			***
Linear velocity	regeneration	approx. m/h	5
Linear velocity	rinsing	approx. m/h	5
Rinse water requirement	slow / fast	approx. BV	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.

** In Methanol: approx. 6 % m/h

*** As regenerantes organic solvents like isopropanole or methanol can be used. Some adsorbates can be desorbed by NaOH / HCl too.

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.

LENNTECH

info@lenntech.com

www.lenntech.com

Tel. +31-15-261.09.00

Fax. +31-15-261.62.89

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

Edition: 2011-10-13
Previous Edition: 2011-05-12

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