

Lewatit® ASB 1 P is a premium grade, gel, strong base type I anion exchange resin specially suited for high purity separate or mixed bed applications if a reduction of the silica concentration is needed. The relatively open matrix of the polymer enables the user to more adequately treat waters of a higher content of organic molecules such as tannic and fulvic acids.

Lewatit® ASB 1 P is produced on the basis of a cross-linked styrene divinylbenzene polymer. It is supplied in the form of spherical beads.

Lewatit® ASB 1 P has high an exchange capacity combined with an excellent stability to organic fouling. It contains a minimum amount of fines (up to 50 mesh), resulting in low pressure losses.

Lewatit® ASB 1 P is available in its chloride form.

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 and the operating conditions are adapted to the individual requirements. Further advice in this matter can be obtained from Lanxess, Business Unit Liquid Purification Technologies (LPT)

General Description

Ionic form as shipped	Cl ⁻
Functional group	Quaternary amine, type I
Matrix	Divinylbenzene / Styrene
Structure	Gel
Appearance	Clear, translucent

Specified Data

		metric units	
Uniformity Coefficient		max.	1.6
Bead size	> 90 %	mm	0.315 - 1.25
Coarse beads	> 1.25 mm	max. vol. %	2
Water retention		wt. %	50 - 56
Total capacity		min. eq/l	1.3

Physical and Chemical Properties

		metric units	
Bulk density	(+/- 5 %)	g/l	656
Density		approx. g/ml	1.06
Volume change	Cl ⁻ --> OH ⁻	max. vol. %	20
Stability	at pH-range		0 - 14
Stability	temperature range	°C	1 - 70
Storability	of the product	max. years	2
Storability	temperature range	°C	4 - 24

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

Recommended Operating Conditions*

		metric units	
OPERATION			
Operating temperature		max. °C	70
Operating pH-range			0 - 14
Bed depth		min. mm	800
Pressure drop	psi/ft bed	max. kPa	200
Linear velocity	exhaustion	max. m/h	5 - 25
Volumetric flow rate	exhaustion	max. BV/h	8 - 32
REGENERATION, COUNTER-CURRENT			
Regenerant	type		NaCl / NaOH
Regenerant	quantity	approx. g/l	64 - 240
Regenerant	concentration	wt. %	3 - 10
Linear velocity	regeneration	approx. m/h	1 - 10
Linear velocity	rinsing	approx. m/h	1 - 10 / 12 - 25
Volumetric flow rate	regeneration	BV/h	1,5 - 4
Volumetric flow rate	rinsing, slow / fast	BV/h	1.5 - 4 / 8 - 32
Rinse water requirement	slow / fast	approx. BV	1 - 2.5 / 3 - 8
REGENERATION, CO-CURRENT			
Regenerant	type		NaCl / NaOH
Regenerant	quantity	approx. g/l	120 - 300
Regenerant	concentration	approx. wt. %	3 - 10
Linear velocity		approx. m/h	3 - 10
Linear velocity	rinsing	approx. m/h	1 - 10 / 12 - 25
Rinse water requirement	slow / fast	approx. BV	1 - 2.5 / 3 - 8
Bed expansion	(20 °C, per m/h)	approx. vol. %	4
Freeboard	backwash	vol. %	80 - 100

* 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.

** Regeneration progressive

** After regeneration the listed TOC and resistivity figures might not be achieved again.

*** 100m/h for polishing

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.

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