

Lewatit® UltraPure 1297 MD is a less separable ready-to-use mixed bed comprising a gel type strongly acidic cation exchange resin (SAC) and a gel type, strongly basic anion exchange resin (SBA, type I), individually with a monodispersed bead size distribution (uniform particles) based on a styrene-divinylbenzene copolymer for the use in working/regenerable and polishing/non-regenerable systems for the production of ultra pure water.

The monodisperse beads are chemically and osmotically highly stable. The optimized kinetics lead to an increased operating capacity, and the very low content of fines also results in a low pressure drop compared to ion exchange resins with heterodisperse bead size distribution.

Lewatit® UltraPure 1297 MD is correspondingly adjusted to the total capacity of the individual components to an equivalent ratio of 1:1. The smaller bead size of the SAC contributes to better mixing properties.

Lewatit® UltraPure 1297 MD is highly regenerated and specially cleaned for meeting the specifications of the semiconductor industry.

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	H ⁺ /OH ⁻
Functional group	Quaternary ammonium Typ1 /sulfonic acid
Matrix	Styrenic
Structure	Gel
Appearance	Dark brown / Light brown translucent

Specified Data

Uniformity coefficient (SAC component)		max.	1.1
Uniformity coefficient (SBA component)		max.	1.1
Mean bead size (SAC component)	d50	mm	0.35 (+/-0.08)
Mean bead size (SBA component)	d50	mm	0.64 (+/-0.06)
Total capacity (SAC component H ⁺ form)		min. eq/L	2.1
Total capacity (SBA component OH ⁻ form)		min. eq/L	1.1

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

Typical Physical and Chemical Properties

Ultrapure water rinse test (resistivity)	after 80 BV	min. MOhm*cm	17.5
Ultrapure water rinse test	delta TOC after 80 BV	max. ppb	30
Bulk density for shipment	(+/- 5%)	g/L	720
Water retention (SAC component H ⁺ form)		approx. weight %	35 - 49
Water retention (SBA component OH ⁻ form)		approx. weight %	54 - 64
Volume change (during exhaustion)		max. approx. %	-20
Stability pH range			0 - 14
Storage time (after delivery)		max. years	1
Storage temperature range		°C	-20 - +40

Operation

Operating temperature		max. °C	60
Operating pH range	during exhaustion		0 - 14
Specific pressure loss kPa*h/m ² (15°C)		kPa*h/m ² (15°C)	2
Max. pressure loss during operation		kPa	200
Specific flow rate		max. BV/h	100

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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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