

**Lewatit® UltraPure 1212 MD** is a gel type, strongly acidic cation exchange resin (SAC) with a monodispersed bead size distribution (uniform particles) based on a styrene-divinylbenzene copolymer for the use in polishing systems for the production of ultrapure 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 1212 MD** is specially produced to meet the water specifications for the hydrogen production.

A combination of **Lewatit® UltraPure 1212 MD** and **Lewatit® UltraPure 1242 MD** excellently performs in polishing mixed bed systems for a further low release of TOC and a high resistivity.

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.

# PRODUCT INFORMATION

## LEWATIT® UltraPure 1212 MD



### Common Description

Delivery form	H <sup>+</sup>
Functional group	Sulfonic acid
Matrix	Styrenic
Structure	Gel
Appearance	dark brown

### Specified Data

Uniformity coefficient		max.	1.1
Mean bead size	d50	mm	0.60 (+/-0.05)
Total capacity (delivery form)		min. eq/L	2.1

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	10
Ultrapure water rinse test	delta TOC after 80 BV	max. ppb	50
Bulk density for shipment	(+/- 5%)	g/L	760
Density		approx. g/mL	1.23
Water retention (delivery form)		approx. weight %	45-50
Volume change (H <sup>+</sup> - Na <sup>+</sup> )		max. approx. %	-8
Storage temperature range		°C	-20 - +40
Ionic conversion H <sup>+</sup>		min. eq. %	99.9

## Operation

Operating temperature		max. °C	100
Operating pH range	during exhaustion		0-14
Bed depth for single column		min. mm	800
Specific pressure loss kPa*h/m <sup>2</sup> (15°C)		kPa*h/m <sup>2</sup> (15°C)	1
Max. pressure loss during operation		kPa	200
Specific flow rate		max. BV/h	50

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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 conditions

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.

### Storage time

The recommended storage time for this product is explained in the technical document "Technical guidelines on the storage of Lewatit® ion exchange resins" available for download on our website. Please use the following link for more information: <https://lanxess.com/en/products-and-brands/brands/lewatit/literature>

### 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.

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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