ATS WATER TECHNOLOGY

PRODUCT INFORMATION
LEWATIT® K 7333

Lewatit®

Lewatit® K 7333 is a strongly basic, gel-type, Palladium doped, polymer-based resin in spherical bead form.

The resin is designed for two main applications.

1) **Lewatit® K 7333** for the removal of dissolved oxygen from water.

A suitable reducing agent such as hydrogen is dissolved in the water to be treated and then passed through a bed of the resin in counterflow. A catalytic reaction produce a concentration of less than 20 ppb oxygen and can be obtained at flow rates up to 80 BV/h.

2) **Lewatit® K 7333** for the removal of hydrogen peroxide in the ultra-pure water production. (Semiconductor)

The using of UV lamps to destroy organic in to carbon dioxide in the ultra-pure water production starts a photolysis of water.

Hydrogen peroxide is arising, which makes problems in the wafer production.

The Palladium doping of **Lewatit® K 7333** helps to destroy the hydrogen peroxide to water and oxygen.

Because of the improved resin matrix **Lewatit® K 7333** can be rinsed larger than 18 MOhm*cm with a TOC release of less than 2 ppb and can be installed after UV lamped in a ultra-pure water production train.

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 Corporation.

Common Description

Delivery form	OH^-/ Pd
Functional group	quarternary ammonium
Matrix	styrenic
Structure	gel
Appearance	grey, transparent

Specified Data

Uniformity coefficient		max.	1.1
Mean bead size	d50	mm	0.64 (+/- 0.05)

Typical Physical and Chemical Properties

		Metric Units	
Bulk density for shipment	(+/- 5%)	g/L	700
Density		approx. g/mL	1.07
Water retention (delivery form)		approx. weight %	56-66
Stability pH range			5-14
Stability temperature range		°C	1-40
Storability temperature range		°C	-20 - +40

Operation

		Metric Units	
Operating temperature		max. °C	40
Operating pH range	during exhaustion		5-14
Bed depth for single column		min. mm	900
Back wash bed expansion per m/h (20°C)		%	10
Specific pressure loss (15°C)		kPa*h/m²	1.1
Max. pressure loss during operation		kPa	250
Specific flow rate		max. BV/h	80 (H2O2 > 100)

Additional Information & Regulations

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE OF PRODUCTS MENTIONED HEREIN IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING ANY PRODUCT, ALWAYS READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION.

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

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 within the product safety information. It is therefore recommended to use the product within this time frame; otherwise the packaging condition should be checked regularly.

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Head Office: 54/18 Bui Quang La, An Hoi Tay Ward, HCMC, Vietnam
Branch Office: 77 Dong Hung Thuan 10B, Dong Hung Thuan Ward, HCMC, Vietnam
Phone: (028) 6258 5368 – (028) 6291 9568
Email: info@atswatertechnology.com
Website: www.atswatertechnology.com

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LANXESS Corporation
111 RIDC Park West Dr
12275-1112 Pittsburgh-Allegheny
USA

+1-800-678-0020
lewatit@lanxess.com

www.lanxess.com
www.lpt.lanxess.com