

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

It is designed to catalytically remove 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 catalyst.

By this method, residual oxygen concentrations of less than 20 g/l can be obtained at flow rates up to 80 m/h and temperatures up to 40°C.

**Lewatit® K 7333** is especially suitable for the removal of dissolved oxygen in the production of ultrapure water.

Operating information: A loss of catalytic activity may be caused by the presence of poisons such as mercury, cadmium, sulfides, organic contaminants such as humates or by microbial growth. Maximum catalytic activity can only be maintained in the presence of sufficient quantities of dissolved reducing agent.

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	OH <sup>-</sup> / Pd <sup>0</sup>
Functional group	quaternary amine, type I
Matrix	crosslinked polystyrene
Structure	gel type beads
Appearance	light yellow, translucent

## Physical and Chemical Properties

	metric units	
Uniformity Coefficient*	max.	1.1
Mean bead size*	mm	0.6 (+/- 0.0 ) 4 5
Bulk density (+/- 5 %)	g/l	680
Density	approx. g/ml	1.07
Water retention	wt. %	62 - 67
Stability temperature range	°C	-20 - 40
Storability of the product	max. months	6
Storability temperature range	°C	-20 - 30
Chloride content	max. mg/l	300

\* Specification values subjected to continuous monitoring.

### Recommended Operating Conditions\*

		<b>metric units</b>	
Operating pH-range			5 - 14
Bed depth		min. mm	900
Specific pressure drop	(15 °C)	approx. kPa*h/m <sup>2</sup>	1.1
Pressure drop		max. kPa	150
Bed expansion	backwash (20 °C)	approx. % per m/h	8
Bed expansion	(20 °C, per m/h)	approx. vol. %	10
Freeboard	backwash (extern / intern)	vol. %	1

\* 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.

## Additional Information & Regulations

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### **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.

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

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**LENNTECH**

WATER TREATMENT SOLUTIONS

info@lennotech.com Tel. +31-152-610-900

www.lennotech.com Fax. +31-152-616-289

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