

Lewatit® IN 50 is an inert, solid, plastic material supplied in spherical form for application in upflow regenerated ion exchange systems. It is used as a covering and protection layer for the upper collection / distribution nozzles. **Lewatit® IN 50** is specially designed for applications with Lewatit® Reverse WS-Systems and other packed bed systems.

Lewatit® IN 50 has a specific gravity that is lighter than water, and therefore it will float on the surface of an ion exchange resin bed. It is also prepared in a particle size distribution designed to optimize flow performance in a reverse fluidized bed operation.

During the downflow service cycle the **Lewatit® IN 50** acts as an inert spacer material that provides a uniformly distributed particle zone for fluid passage through the resin bed to the collection system. During the upflow compaction and regeneration cycle the **Lewatit® IN 50** resin allows dirt and resin fragments to pass through the inert zone to waste while retaining the resin bed and protecting the collector system.

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	inert granular
Functional group	none
Appearance	white, translucent

Physical and Chemical Properties

	metric units	
Bead size	mm	2.5 - 5.0
Bulk density (+/- 5 %)	g/l	570
Density	approx. g/ml	0.8
Stability at pH-range		0 - 14
Storability of the product	max. years	2
Storability temperature range	°C	-20 - +40

Recommended Operating Conditions*

	metric units	
Operating temperature	max. °C	100
Operating pH-range		0 - 14
Bed depth	min. mm	150
Specific pressure loss** (15 °C)	approx. kPa*m/h*m	0.1
Pressure drop	max. kPa	300

* 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.

** The pressure drop for a Lewatit® ion exchange resin bed can be calculated using this formula where m/h represents the linear velocity through the resin bed (in meter/hour), and m represents the height of the resin bed (in meter). Additional information (including changes in Pressure Loss with changes in temperature) can be found in own Technical Information sheets under Pressure Loss Factor available from Lanxess, BU ION.

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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