PRODUCT INFORMATION
LEWATIT® AF 5

Lewatit® AF 5 is a microporous carbonaceous bead type material designed for downstream process separation and purification. The material is derived from a synthetic polymer, and its adsorptive characteristics are defined by a proprietary conditioning process. This conditioning process provides a unique adsorptive surface with excellent selectivity for small polar molecules from polar solvents. In addition, the narrow and uniform small pores provide some size exclusion chromatographic effects. **Lewatit® AF 5** is recommended for adsorptive polishing in water treatment applications, and for adsorption for traces of organic substances such as chlorinated hydrocarbons, MTBE, organic phosphates, amines, pesticides, herbicides, and metabolites.

Lewatit® AF 5 is remarkable for its well defined uniform pore distribution, high surface area, and high adsorptive capacity. The separation mechanism is partially via low energy hydrogen bonding, resulting in simple elution methods with a variety of solvents. **Lewatit® AF 5** is commonly eluted with steam, or hot water, without damage to the surface structure of **Lewatit® AF 5**.

In contrast to conventional granular carbon adsorbers, **Lewatit® AF 5** has a narrow bead size distribution, and excellent mechanical stability (mechanical crush strength is approx 3000 gms/bead in Chatillion measurement). **Lewatit® AF 5** is ideal for use in fixed bed or fluidized adsorption beds, with no carry-out of fine particles resulting from bead attrition.

We recommend that preliminary tests be carried out at laboratory scale prior to industrial application. The laboratory experiments should define the optimum loading and elution conditions to maximize capacity, and elution techniques to recover the surface area for subsequent loading cycles.

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	neutral
Functional group	none
Matrix	carbon
Appearance	black beads

Physical and Chemical Properties

		metric units	
Bead size*	> 90 %	mm	0.4 - 0.8
Bulk density	(+/- 5 %)	g/l	550 - 650
Surface area	BET	min. m^2/g	1200
Pore volume		approx. cm^3/g	0.15
Pore diameter	average	nm	8
Stability	temperature range	°C	-20 - 300
Storability	of the product	max. years	2

* Specification values subjected to continuous monitoring.

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.

LENNTECH
info@lenntech.com Tel. +31-152-610-900
www.lenntech.com Fax. +31-152-616-289