ATS WATER TECHNOLOGY

PRODUCT INFORMATION
LEWATIT® S 7968

Lewatit®

Lewatit® S 7968 is a Food grade, macroporous adsorber resin without functional groups. It has beads of a uniform size (monodisperse).

It can be used in the extraction / purification of natural or synthetic organic products in the food industry.

In addition, it can be used for the adsorption / removal of:

- anionic, cationic and nonionic surfactants
- chlorinated and nitrated hydrocarbons
- colorants or inert organic materials
- for removing of non-polar organic ingredients of low molecular mass from landfill leachates
- for debittering of fruit juices

Lewatit® S 7968 has the following properties:

- very good mechanical stability and low attrition
- longer resin life time and better regeneration efficiency compared to activated carbon
- high adsorption capacity especially at medium and high feed concentration
- good kinetic performance during adsorption and elution

Prior to industrial application, preliminary tests should be carried out on a laboratory scale, in order to determine the maximum adsorptive capacity and the optium regenerant. Experience has shown that the maximum capacity of the adsorber resin is reached after the third cycle.

When using **Lewatit® S 7968** to treat potable water and the aqueous solutions listed above, special care should be given to the initial cycles of the new resin. Please refer to the recommended start-up conditions available on request.

Lewatit® S 7968 is stored and delivered in a concentrated NaCl brine to avoid biogrowth. Please wash the resin with demin. water before use.

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	Neutral
Functional group	None
Matrix	Styrenic
Structure	Macroporous
Appearance	White, opaque

Specified Data

		US Units			
Uniformity coefficient				max.	1.1
Mean bead size	d50			mm	0.44-0.54

Typical Physical and Chemical Properties

		US Units		Metric Units	
Bulk density for shipment	(+/- 5%)	lb/ft³	37.5	g/L	600
Density				approx. g/mL	1.0
Water retention (delivery form)				approx. weight %	54-63
Stability pH range					0-14
Stability temperature range				°C	1-120
Storage time (after delivery)				max. years	2
Storability temperature range				°C	-20 - +40
Surface BET				approx. m²/g	800
Pore volume				approx. cm³/g	1.2
Pore diameter				approx. nm	5-10

Operation

		US Units		Metric Units	
Operating temperature		max. °F	248	max. °C	120
Operating pH range	during exhaustion				0-14
Bed depth for single column		min. inches	39.4	min. mm	1000
Back wash bed expansion per m/h (20°C)				%	45
Specific pressure loss (15°C)				kPa*h/m²	1.5
Max. pressure loss during operation		PSI	36	kPa	250
Specific flow rate		max. gpm/ft3	0.63	max. BV/h	5

Regeneration

		US Units		Metric Units	
HCl regeneration	concentration	approx. wt. %	4-6	approx. wt. %	4-6
HCl regeneration	quantity co-current	min. lb/ft³	6.3	min. g/L resin	100
HCl regeneration	quantity counter-current	min. lb/ft³	4.1	min. g/L resin	55-65
H_2SO_4 regeneration	concentration	approx. wt. %	1.5-3	approx. wt. %	1.5-3
H_2SO_4 regeneration	quantity co-current	min. lb/ft³	9.4	min. g/L resin	150
H_2SO_4 regeneration	quantity counter-current	min. lb/ft³	5.0	min. g/L resin	80
NaOH regeneration	concentration	approx. wt. %	2-6	approx. wt. %	2-6
NaOH regeneration	quantity co-current	min. lb/ft³	6.3	min. g/L resin	100
NaOH regeneration	quantity counter-current	min. lb/ft³	3.8	min. g/L resin	60
Regeneration contact time		min. minutes	20	min. minutes	30
Slow rinse at regeneration flow rate		min. gal/ft³	15.0	min. BV	2
Fast rinse at service flow rate		min. gal/ft³	29.9	min. BV	4

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, Ward 12, Go Vap District, HCMC, Vietnam
Branch Office: 77 DHT10B, Dong Hung Thuan Ward, District 12, HCMC, Vietnam
Phone: (028) 6258 5368 – (028) 6291 9568
Email: info@atswatertechnology.com
Website: www.atswatertechnology.com

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