

# Product Information

## Lewatit<sup>®</sup> S 1468



**Lewatit<sup>®</sup> S 1468** is a strongly acidic, gelular cation exchange resin with beads of uniform particle size (monodispersed) based on a styrene / dVB copolymer. The monodispersed beads have extremely high chemical and osmotic stability. **Lewatit<sup>®</sup> S 1468** is characterized by high monodispersity (uniformity coefficient: max. 1.1) and very low fines content which results in low pressure losses and increased operating capacity when compared to standard resins.

Applications include: softening of solutions, especially for sugar and pectin thin juices, decationization of organic products (e.g. sugar beet, sugar cane, starch sugar, glycerine, gelatine, whey and food acids) and extraction of amino acids, e.g. lysine. **Lewatit<sup>®</sup> S 1468** is in compliance with FDA Regulations 21 CFR 173.25 (a). **Lewatit<sup>®</sup> S 1468** is tested and certified by the Water Quality Association to meet NSF/ANSI Standard 61.

### Physical and Chemical Properties

### U.S. Units

### Metric Units

|                        |                                   |                          |          |                          |         |
|------------------------|-----------------------------------|--------------------------|----------|--------------------------|---------|
| Functional group       |                                   | sulfonic acid            |          | sulfonic acid            |         |
| Matrix                 |                                   | dVB / styrene            |          | dVB / styrene            |         |
| Appearance             |                                   | light brown, translucent |          | light brown, translucent |         |
| Ionic form as shipped  |                                   | Na <sup>+</sup>          |          | Na <sup>+</sup>          |         |
| Uniformity coefficient |                                   | max.                     | 1.1      | max.                     | 1.1     |
| Mean bead size*        | AB +/- 0.05                       |                          |          | mm                       | 0.60    |
| Shipping weight        | +/- 5%                            | lbs/ft <sup>3</sup>      | 51       | g/l                      | 820     |
| Density                |                                   |                          |          | g/ml                     | 1.28    |
| Water retention*       |                                   | %                        | 42 - 48  | %                        | 42 - 48 |
| Total capacity*        | min.                              | Kgr/ft <sup>3</sup>      | 43.7     | eq/l                     | 2.0     |
| Volume change          | Na <sup>+</sup> >> H <sup>+</sup> | max. %                   | 8        | max. %                   | 8       |
| Stability              | pH range                          |                          | 0 - 14   |                          | 0 - 14  |
| Stability              | temp range                        | °F                       | 34 - 248 | °C                       | 1 - 120 |
| Storability            | of product                        | max. years               | 2        | max. years               | 2       |
| Storability            | temp range                        | °F                       | 34 - 104 | °C                       | 1 - 40  |

\* Specification values subjected to continuous monitoring.

**MSDS:** Material Safety Data Sheets are available for all Sybron Chemicals Inc. products. The MSDS contains pertinent information that may be required to ensure safe handling and use of our products. It is recommended that copies of the MSDS be obtained by calling 1-800-678-0020 or 1-800-526-9377.

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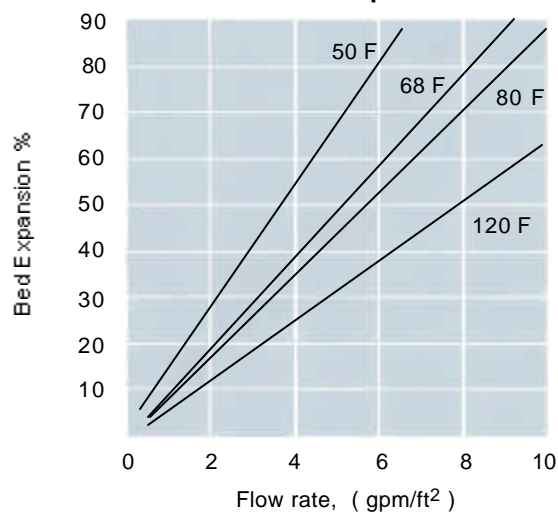
## Recommended Operating Conditions

### U.S. Units

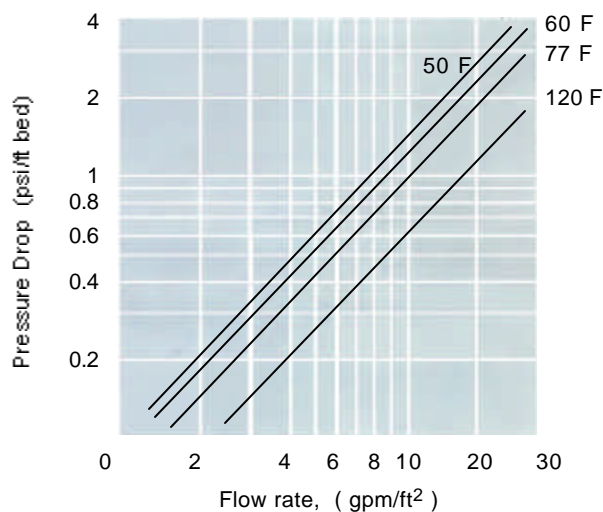
### Metric Units

|                          |                    |                     |               |         |              |
|--------------------------|--------------------|---------------------|---------------|---------|--------------|
| Operating temperature    |                    | max. °F             | 248           | max. °C | 120          |
| Operating pH range       |                    |                     | 0 - 14        |         | 0 - 14       |
| Bed Depth                |                    | min. inches         | 31            | min. mm | 800          |
| Pressure drop            |                    |                     | see chart     |         | see chart    |
| Max. pressure loss       |                    | psi                 | 28            | Kpa     | 200          |
| Surface flow rate        | exhaustion         | gpm/ft <sup>2</sup> | 2 - 25        | m/hr    | 5 - 60       |
| Surface flow rate        | backwash           |                     | see chart     |         | see chart    |
| Bulk flow rate           | exhaustion         | gpm/ft <sup>3</sup> | 1 - 6+        | BV/hr   | 8 - 48+      |
| Bed expansion            | %                  |                     | 50 - 75       | %       | 50 - 75      |
| Freeboard                | % of bed depth     |                     | 60 - 80       |         | 60 - 80      |
| Regenerant               | type               |                     | acid   NaCl   |         | acid   NaCl  |
| Regenerant               | level              | lbs/ft <sup>3</sup> | 5 - 20        | g/l     | 80 - 320     |
| Regenerant               | concentration      | %                   | 0.5-6   8-13  | %       | 0.5-6   8-13 |
| Surface flow rate        | regeneration       | gpm/ft <sup>2</sup> | 0.4 - 4       | m/hr    | 1 - 10       |
| Surface flow rate        | rinse, slow / fast | gpm/ft <sup>2</sup> | 0.4-4 / 2-20  | m/hr    | 1-10 / 5-50  |
| Bulk flow rate           | regeneration       | gpm/ft <sup>3</sup> | 0.5 - 1.5     | BV/hr   | 4 - 12       |
| Bulk flow rate           | rinse, slow / fast | gpm/ft <sup>3</sup> | 0.5-1.5 / 1-6 | BV/hr   | 2.5-8 / 8-48 |
| Rinse water requirements | slow / fast        | gal/ft <sup>3</sup> | 7-15 / 14-40  | BV      | 1-2 / 2-5    |

**Backwash Expansion**



**Pressure Loss**



linear velocity: m/hr = gpm/ft<sup>2</sup> X 2.44      pressure drop: kPa = psi X 6.89476

# Product Information

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## Additional Information and Regulations

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### Safety precautions

Strong oxidants, e.g. nitric acid, can cause violent reactions when in contact with ion exchange resins.

### Toxicity

The material safety data sheet must be observed. The MSDS contains additional data on product description, transport, storage, handling, safety and ecology.

### Storage

It is recommended to store ion exchange resins at temperatures above the freezing point of water. Ion exchange resin should not be stored in direct sunlight. If the resin should become frozen, the resin should be left to thaw out at ambient temperature before handling. No attempt should be made to accelerate the thawing process.

### Disposal

The MSDS contains additional data on product safety and disposal.

### Start-up Conditions

When using Lewatit<sup>®</sup> S 1468 for potable water or food applications, special care should be given to the initial cycles of the new resin. The resin should be rinsed with 20 bed volumes of rinse water at a flow rate of 2-4 gpm/sq.ft. at ambient temperature.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and application. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change with notice. It is expressly understood and agreed that you assume and hereby expressly release us from liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact under the claims of any patent.

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