

# Product Information

## Ionac<sup>(R)</sup> C-249



**Ionac<sup>(R)</sup> C-249** is a premium grade gel cation exchange resin which meets the most exacting requirements of the household and industrial water treatment industries. **Ionac<sup>(R)</sup> C-249** is a bead form, standard cross-linked styrene/divinylbenzene resin which has excellent stability and operating characteristics.

**Ionac<sup>(R)</sup> C-249** is supplied in the fully swollen moist form and assures compliance with FDA regulation 21 CFR 173.25. Applications include: softening, demineralization, service-exchange and mixed bed polishing.

### Physical and Chemical Properties

### U.S. Units

### Metric Units

			sulfonic acid		sulfonic acid
Functional group			dvb / styrene		dvb / styrene
Matrix			brown / black, translucent		brown / black, translucent
Appearance			Na <sup>+</sup>		Na <sup>+</sup>
Ionic form as shipped		max.	1.6	max.	1.6
Uniformity coefficient		US mesh	16 - 40	mm	0.4 - 1.25
Bead size*	AB +/- 0.06			mm	0.47
Effective bead size	+/- 5%	lbs/ft <sup>3</sup>	52	g/l	832
Shipping weight				g/ml	1.26
Density		%	45 - 48	%	45 - 48
Water retention*	min.	Kgr/ft <sup>3</sup>	41	eq/l	1.9
Total capacity*	Na <sup>+</sup> >> H <sup>+</sup>	max. %	7	max. %	7
Volume change, total	pH range		0 - 14		0 - 14
Stability	temp range	°F	34 - 280	Cl, °C	1 - 140
Stability	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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## Ionac<sup>®</sup> C-249



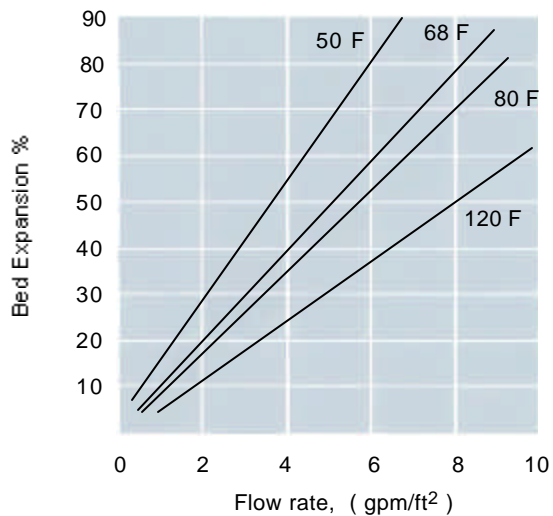
### Recommended Operating Conditions

### U.S. Units

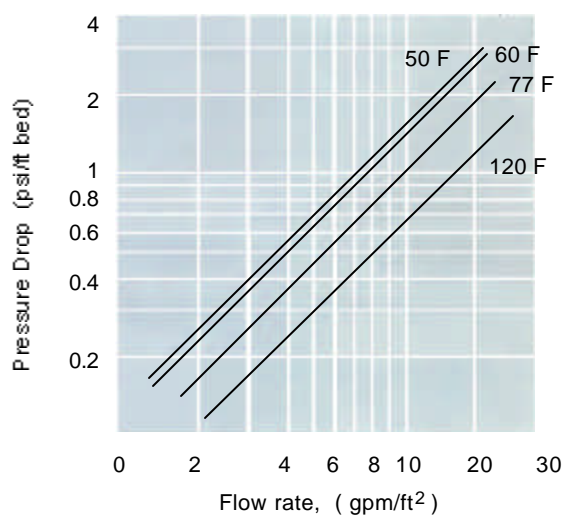
### Metric Units

Operating temperature		max. °F	280	max. °C	140
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	409	Kpa	280
Surface flow rate	exhaustion	gpm/ft <sup>2</sup>	2 - 20	m/hr	5 - 50
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		65 - 75		65 - 75
Regenerant	type		NaCl / KCl		NaCl / KCl
Regenerant	level	lbs/ft <sup>3</sup>	4 - 20	g/l	64 - 320
Regenerant	concentration	%	8 - 13	%	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**



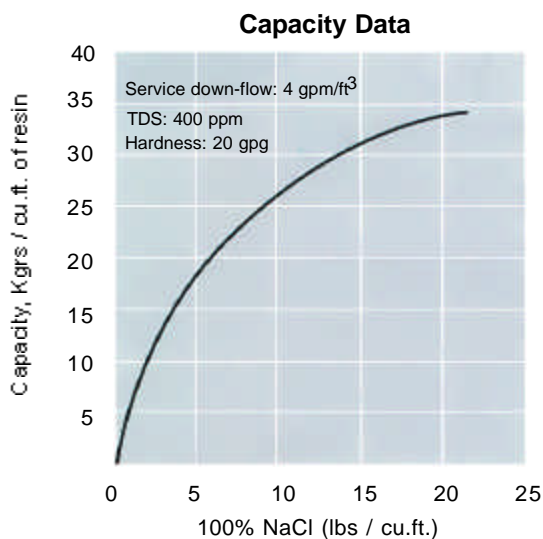
linear velocity: m/hr = gpm/ft<sup>2</sup> X 2.44    pressure drop: kPa = psi X 6.89476

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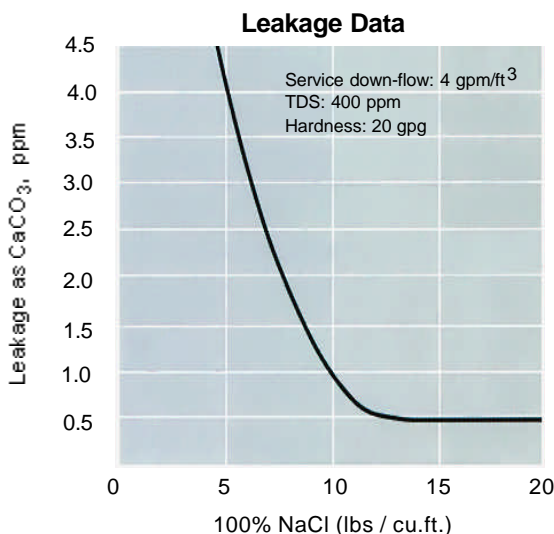
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### Additional Information and Regulations



capacity: eq/l = Kgrs/cu.ft. / 21.83



NaCl level: g/l = lbs/cu.ft. X 16

#### 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.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (wether 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 whhether they 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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