



Product Data Sheet

TAPTEC™ SR1L Na Ion Exchange Resin

Drinking Water-grade, Gel, Strong Acid Cation Exchange Resin for Domestic Softening

Description

TAPTEC™ SR1L Na Ion Exchange Resin is a gel, strong acid cation exchange resin specially developed with a solvent-free manufacturing process for softening potable water. The resin has excellent physical, chemical, and thermal stability, good ion exchange kinetics, and high exchange capacity. TAPTEC™ SR1L Na is produced in a free-flowing form which makes the filling of the units and cartridges very easy and rapid.

TAPTEC™ SR1L Na is analyzed to facilitate its compliance with high-purity specification, in particular: physical and chemical properties, individual release of certain substance in the treated water, global release of organic substances, and total microbial count.

Applications

- Domestic softening

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Amber, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	Na ⁺
Total Exchange Capacity	≥ 1.9 eq/L
Water Retention Capacity	41 – 49%
Particle Size §	
Particle Diameter	600 – 800 µm
< 300 µm	≤ 2.0%
> 1180 µm	≤ 2.0%
Density	
Shipping Weight	808 g/L

§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

Suggested Operating Conditions

Maximum Operating Temperature	120°C (248°F)		
Flowrates			
Service	5 – 50 BV*/h (0.63 – 6.3 gpm/ft³)		
Backwash	See Figure 1		
Regeneration			
NaCl	2 – 8 BV/h (0.25 – 1.0 gpm/ft³)		
HCl	2 – 5 BV/h (0.25 – 0.63 gpm/ft³)		
H₂SO₄	2 – 20 BV/h (0.25 – 2.5 gpm/ft³)		
Slow Rinse	Regeneration flowrate for 2 BV		
Fast Rinse	Service flowrate for 2 – 4 BV		
Contact Time			
Regeneration	≥ 30 minutes		
Regenerant	NaCl	HCl	H₂SO₄
Concentration	10%	5 – 8%	0.7 – 6%
Level	60 – 250 kg/m³	50 – 150 kg/m³	50 – 240 kg/m³
	(3.8 – 15.6 lb/ft³)	(3.1 – 9.4 lb/ft³)	(3.1 – 15 lb/ft³)

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin or 7.5 gal per ft³ resin

Hydraulic Characteristics

Estimated bed expansion of TAPTEC™ SR1L Na Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for TAPTEC™ SR1L Na as a function of service flowrate and temperature is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean water and a well-classified bed.

Figure 1: Backwash Expansion

Temperature = 5 – 60°C (41 – 140°F)

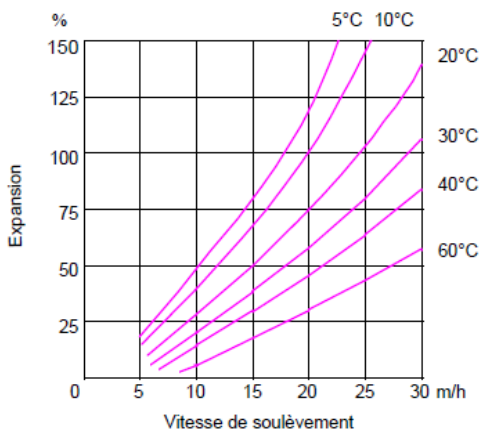
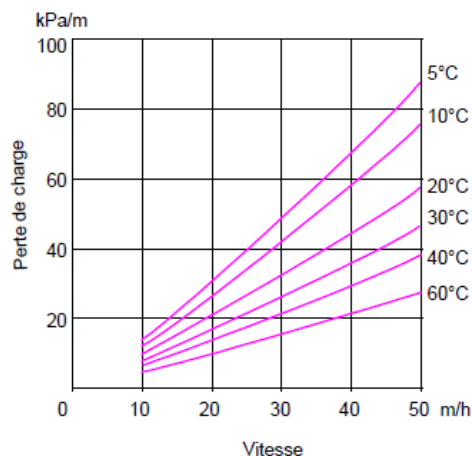


Figure 2: Pressure Drop

Temperature = 5 – 60°C (41 – 140°F)



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Please be aware of the following:

- **WARNING:** Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

Regulatory Note

This product may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

Have a question? Contact us at:

www.dupont.com/water/contact-us

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