



## Product Data Sheet

### TapTec™ SR1L Na 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

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

§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 45-D00954-en).

## Suggested Operating Conditions

Maximum Operating Temperature	120°C (248°F)		
Flowrates			
Service	5 – 50 BV*/h (0.63 – 6.3 gpm/ft <sup>3</sup> )		
Backwash	See Figure 1		
Regeneration			
NaCl	2 – 8 BV/h (0.25 – 1.0 gpm/ft <sup>3</sup> )		
HCl	2 – 5 BV/h (0.25 – 0.63 gpm/ft <sup>3</sup> )		
H <sub>2</sub> SO <sub>4</sub>	2 – 20 BV/h (0.25 – 2.5 gpm/ft <sup>3</sup> )		
Slow Rinse	Regeneration flowrate for 2 BV		
Fast Rinse	Service flowrate for 2 – 4 BV		
Contact Time			
Regeneration	≥ 30 minutes		
Regenerant	NaCl	HCl	H <sub>2</sub> SO <sub>4</sub>
Concentration	10%	5 – 8%	0.7 – 6%
Level	60 – 250 kg/m <sup>3</sup> (3.8 – 15.6 lb/ft <sup>3</sup> )	50 – 150 kg/m <sup>3</sup> (3.1 – 9.4 lb/ft <sup>3</sup> )	50 – 240 kg/m <sup>3</sup> (3.1 – 15 lb/ft <sup>3</sup> )

\* 1 BV (Bed Volume) = 1 m<sup>3</sup> solution per m<sup>3</sup> resin or 7.5 gal per ft<sup>3</sup> resin

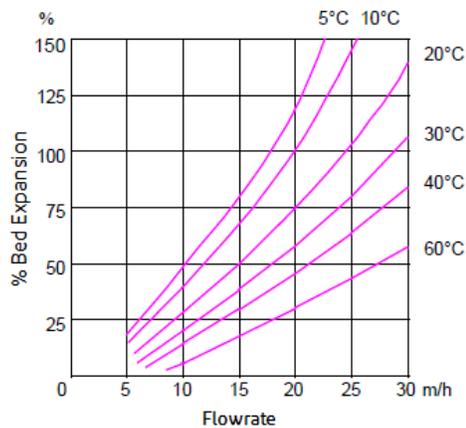
## Hydraulic Characteristics

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.

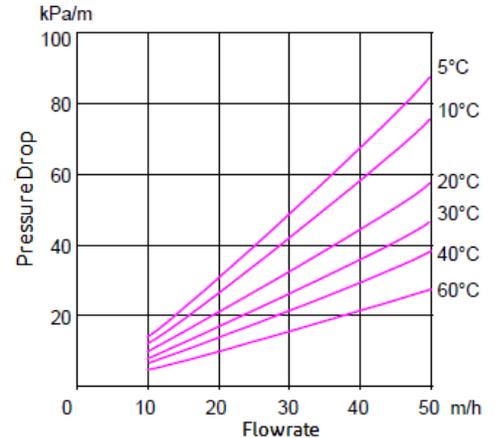
**Figure 1: Bed Expansion**

Temperature = 5 – 60°C (41 – 140°F)



**Figure 2: Pressure Drop**

Temperature = 5 – 60°C (41 – 140°F)



## Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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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](http://www.dupont.com/water/contact-us)

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