



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

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. 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 ³)		
Backwash	See Figure 1		
Regeneration			
NaCl	2 – 8 BV/h (0.25 – 1.0 gpm/ft ³)		
HCl	2 – 5 BV/h (0.25 – 0.63 gpm/ft ³)		
H ₂ SO ₄	2 – 20 BV/h (0.25 – 2.5 gpm/ft ³)		
Slow Rinse	Regeneration flowrate for 2 BV		
Fast Rinse	Service flowrate for 2 – 4 BV		
Contact Time			
Regeneration	≥ 30 minutes		
Regenerant	NaCl	HCl	H ₂ SO ₄
Concentration	10%	5 – 8%	0.7 – 6%
Level	60 – 250 kg/m ³ (3.8 – 15.6 lb/ft ³)	50 – 150 kg/m ³ (3.1 – 9.4 lb/ft ³)	50 – 240 kg/m ³ (3.1 – 15 lb/ft ³)

* 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: Bed Expansion

Temperature = 5 – 60°C (41 – 140°F)

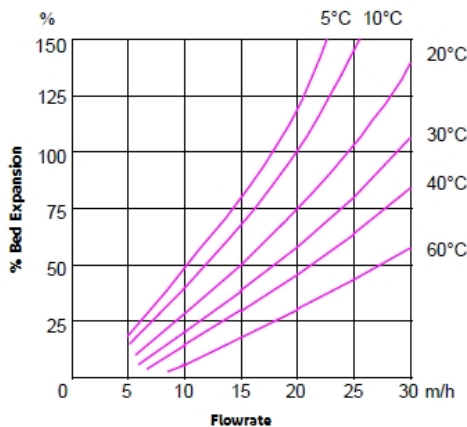
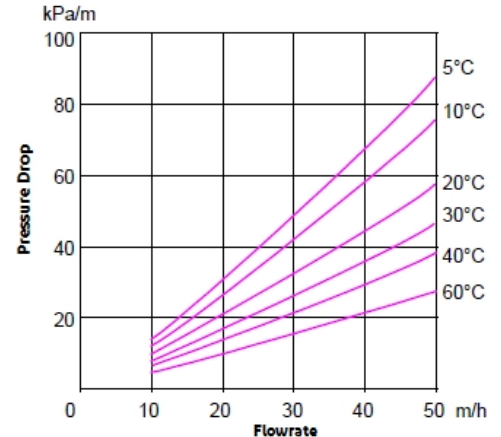


Figure 2: Pressure Drop

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.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

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

All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where DuPont is represented. The claims made may not have been approved for use in all countries. Please note that physical properties may vary depending on certain conditions and while operating conditions stated in this document are intended to lengthen product lifespan and/or improve product performance, it will ultimately depend on actual circumstances and is in no event a guarantee of achieving any specific results. DuPont assumes no obligation or liability for the information in this document. References to "DuPont" or the "Company" mean the DuPont legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. No freedom from infringement of any patent or trademark owned by DuPont or others is to be inferred.

© 2023 DuPont. DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or ® are owned by affiliates of DuPont de Nemours Inc., unless otherwise noted.

