



# AMBERLITE® SR1L Na

Strongly Acidic Cation Exchange Resin

## PRODUCT DATA SHEET

AMBERLITE SR1L Na is a gel type strong acid cation exchange resin of the sulphonated polystyrene type, used for water softening. Its principal characteristics are excellent physical, chemical and thermal stability, good ion exchange kinetics and high exchange capacity. AMBERLITE SR1L Na has been specially developed for potable

water and food applications (i.e. decalcification of saccharose thin juice) following a special manufacturing process which does not use any solvents. AMBERLITE SR1L Na is produced in a free flowing form which makes the filling of the units and cartridges very easy and rapid.

### PROPERTIES

Matrix _____	Styrene divinylbenzene copolymer
Functional groups _____	Sulphonates
Physical form _____	Amber beads
Ionic form as shipped _____	Na <sup>+</sup>
Total exchange capacity <sup>[1]</sup> _____	2.05 eq/ L (Na <sup>+</sup> form)
Moisture holding capacity <sup>[2]</sup> _____	41 to 49 % (Na <sup>+</sup> form)
Shipping weight _____	820 g/ L
Harmonic mean size _____	600 - 800 µm
Uniformity coefficient _____	≤ 1.8
Fines content <sup>[2]</sup> _____	< 0.300 mm : 2.0 % max
Coarse beads _____	> 1.180 mm : 2.0 % max
Chemical resistance _____	Insoluble in dilute solutions of acids or bases and common solvents

<sup>[1]</sup> Average value calculated from statistical quality control.

<sup>[2]</sup> Contractual value

Test methods and SQC charts are available on request.

### SUGGESTED OPERATING CONDITIONS (WATER TREATMENT)

Maximum operating temperature _____	120 °C
Service Flowrate _____	5 to 50* BV/ h
Regenerants _____	NaCl      HCl      H <sub>2</sub> SO <sub>4</sub>
Level (g/ L) _____	60 to 250    50 to 150    50 to 240
Concentration (%) _____	10            5 to 8        0.7 to 6
Flowrate (BV/ h) _____	2 to 8        2 to 5        2 to 20
Minimum contact time _____	30 minutes
Slow rinse _____	2 BV at regeneration flowrate
Fast rinse _____	2 to 4 BV at service flow rate

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

## COMPLIANCE

AMBERLITE SR1L Na is approved in France, Austria, Poland, the UK for the treatment of potable water. It complies with the Council of Europe Resolution AP(97)1, and with US FDA 21 CFR 173.25 (a). All ingredients entering in the composition of AMBERLITE SR1L Na are listed in German BgVV XXIV recommendation\*, provided it has been pre-treated according to Rohm and Haas recommendations.

AMBERLITE SR1L Na is approved by la Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes in France as sugar industry processing aid.

For further details regarding individual registrations/ compliances, please contact your nearest Rohm and Haas office.

\* in Germany complies with DIN 19633 (<10 ppm TOC).

## QUALITY CONTROL

AMBERLITE SR1L Na is analysed to ensure its compliance with high purity specification, in particular:

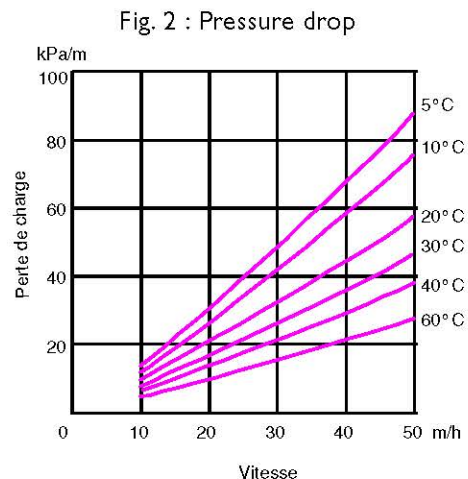
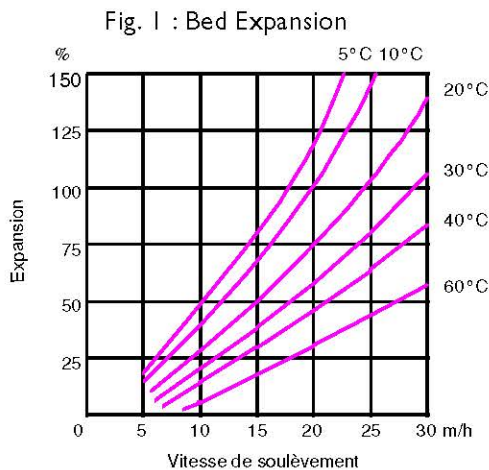
- Physical and chemical properties,
- Individual release of certain substance in the treated water,
- Global release of organic substances expressed in TOC (Total Organic Carbon),
- Total microbial count.

## HYDRAULIC CHARACTERISTICS

### (Water Treatment)

Figure 1 shows the bed expansion of AMBERLITE SR1L Na, as a function of backwash flow rate and water temperature.

Figure 2 shows the pressure drop data for AMBERLITE SR1L Na, as a function of service flow rate and water temperature.



All our products are produced in ISO 9002 certified manufacturing facilities.

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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

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