Product Data Sheet

DIAION™ SAT20L

DIAION™ SAT20L is a gel type strongly basic anion exchange resin. It has a standard cross-linkages and shows lower TOC and metal leakage. It is recommended for semiconductor UPW application.

Product

Grade Name	DIAION™ SAT20L
Type	Strong Base Anion
Matrix	Styrene-DVB, Gel
Functional Group	Type I (trimethyl ammonium groups)
Ionic Form	OH^-

Specification

Color and Shape		- Light Yellow Translucent Beads
Salt Splitting Capacity	meq/mL	0.9 min.
Water Content	%	62 - 72
Particle Size Distribution on 1180 µm	%	5 max.
Particle Size Distribution thr. 425 µm	%	1 max.
Effective Size	mm	0.45 min.
Uniformity Coefficient	-	1.6 max.
Ionic Form Conversion (OH^-)	eq%	90 min.
Ionic Form Conversion (Cl^-)	eq%	1 max.
Metal Content (Na)	ppb/dry-g	1000 max.
Metal Content (Ca)	ppb/dry-g	1000 max.
Metal Content (Fe)	ppb/dry-g	1000 max.
Metal Content (Zn)	ppb/dry-g	1000 max.
ΔTOC after 12 hours	ppb	1.0 max.
Resistivity after 12 hours	MΩ·cm	18.1 min.

Typical Properties

Shipping Density	g/L	660
Mean Particle Size	µm	720
Particle Density	g/mL	1.07
Total Swelling (Cl^- to OH^-)	%	24

Recommended Operating Conditions

Maximum Operating Temperature	°C	80 (Cl^-) 60 (OH^-)
Operating pH Range		0 - 14
Minimum Bed Depth	mm	800
Service Flow Rate	m/h	10 - 60
Regenerant		NaOH
Regenerant Concentration	%	NaOH 2 - 8
Regenerant Level	g/L	50 - 200
Regenerant Flow Rate	m/h	2 - 8
Total Rinse Requirement	BV	2 - 10

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ SAT20L resin in normal down flow operation is shown in the graphs below.

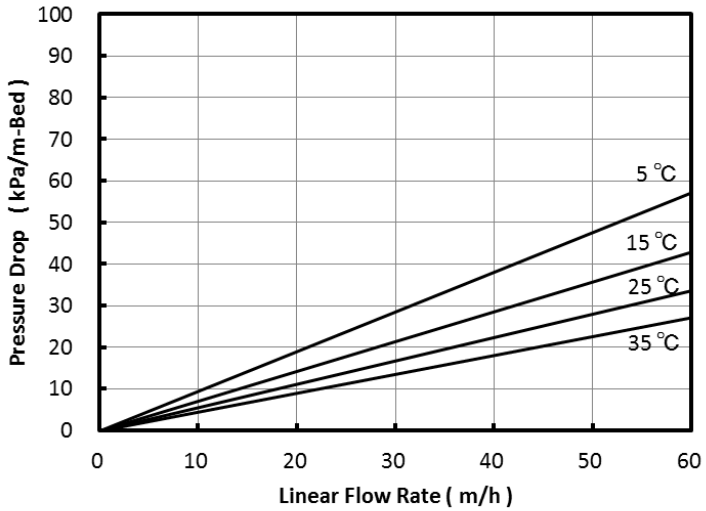

Fig. 1 Pressure Drop of SAT20L

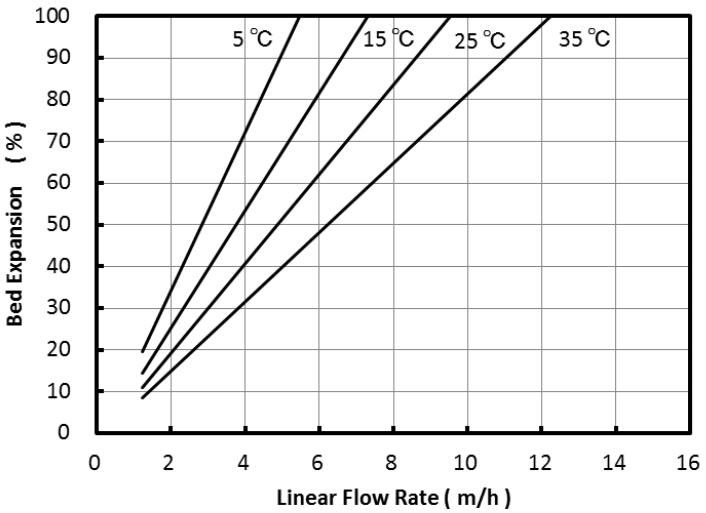

Fig. 2 Bed Expansion of SAT20L

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Rinse Performance

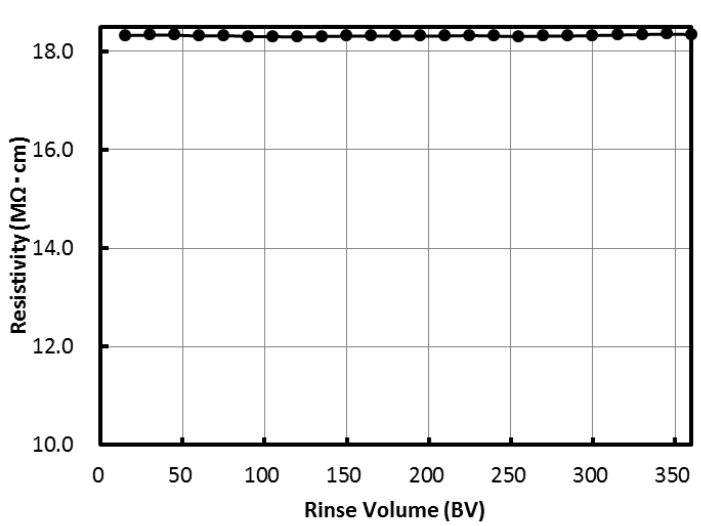

Fig. 3 Resistivity versus Rinse Volume for SAT20L
Flow rate : SV 30 (15 L/hr), Resin volume : 500 mL-R

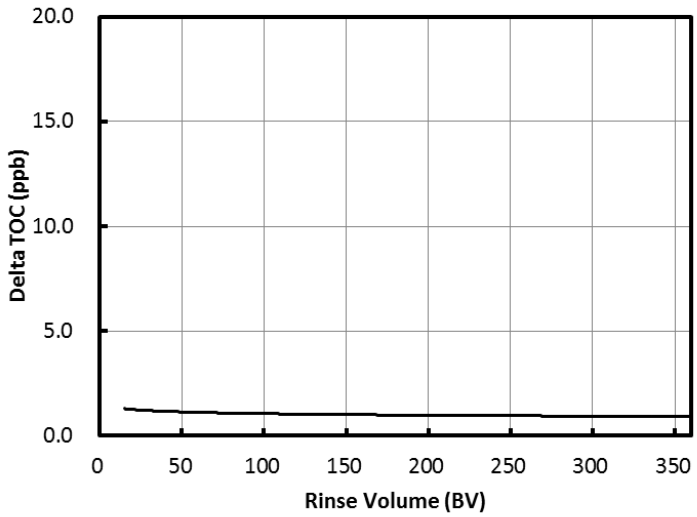

Fig. 4 Delta TOC versus Rinse Volume for SAT20L
Flow rate : SV 30 (15 L/hr), Resin volume : 500 mL-R

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