

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	BV/h	10 - 60
Regenerant		NaOH
Regenerant Concentration	%	NaOH 2 - 8
Regenerant Level	g/L	50 - 200
Regenerant Flow Rate	BV/h	2 - 8
Total Rinse Requirement	BV	2 - 10

1 BV(Bed Volume)=1 m³/m³-resin

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.

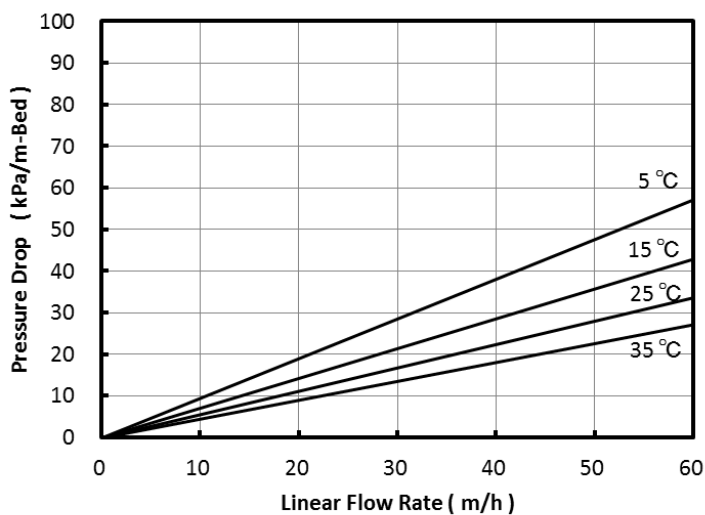


Fig. 1 Pressure Drop of SAT20L

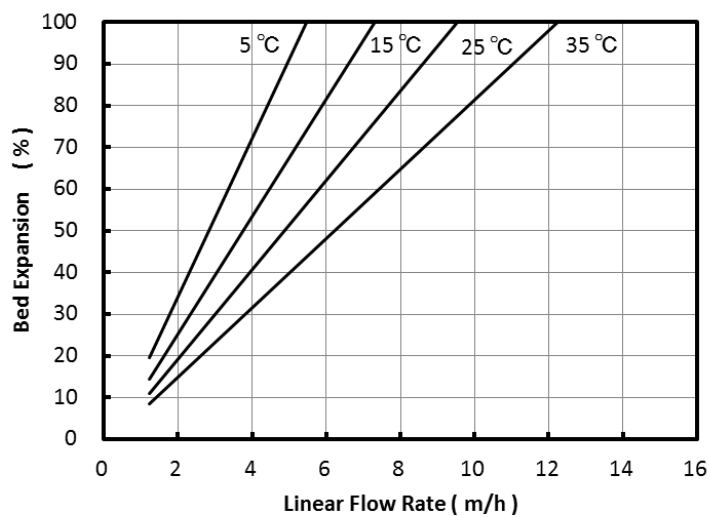


Fig. 2 Bed Expansion of SAT20L

Rinse Performance

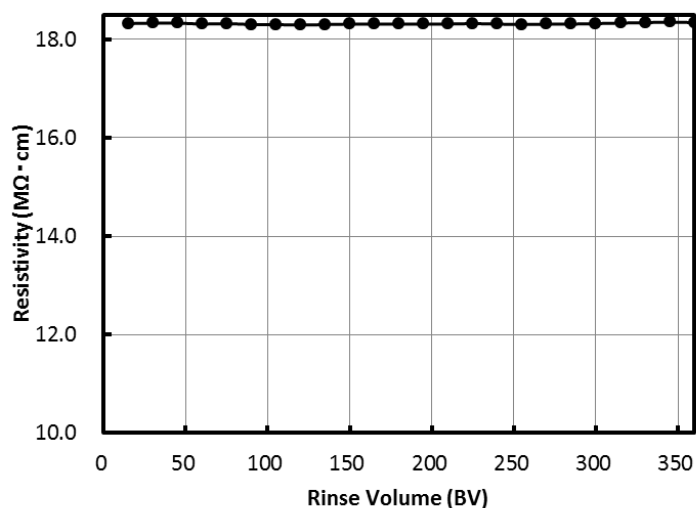


Fig. 3 Resistivity versus Rinse Volume for SAT20L
Flow rate : SV 30 (15 L/hr), Resin volume : 500 mL-R

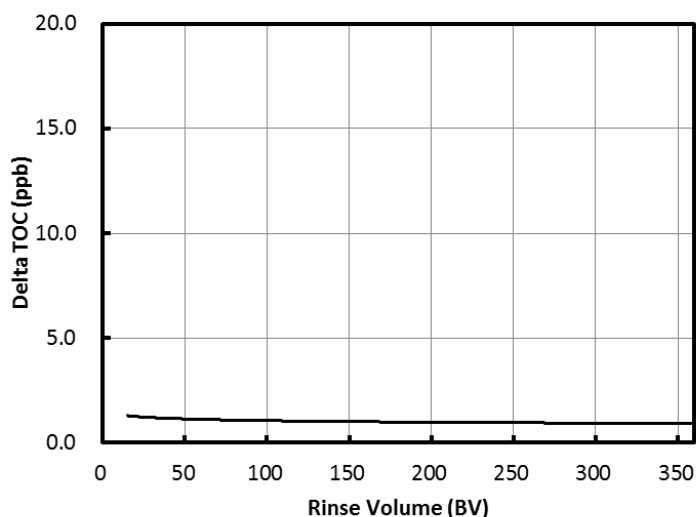


Fig. 4 Delta TOC versus Rinse Volume for SAT20L
Flow rate : SV 30 (15 L/hr), Resin volume : 500 mL-R

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