

A large background image showing a microscopic view of numerous spherical resin beads. The left side of the image shows clear, colorless beads, while the right side shows beads that are a yellowish-brown color, indicating they are loaded with ions.

OVIVO Resins

OvivUP™ - A009

**Anion Exchange Resin
for UPW Plants**

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Overview

OvivUp™ - A009 Anion Exchange Resin is specially conditioned and rinsed for producing Semiconductor grade UPW with the highest quality standards. The resin is characterized by a great performance as a component of regenerable mixed bed as well as a regenerable single bed ion exchanger.

This is achieved by using very high grade UP water (following the ITRS guidelines) for the cleaning and rinsing of the UP grade resins during the manufacturing process. A special care is given to critical parameters such as TOC, silica and boron, particles and metals.

OvivUP-A009

PHYSICAL AND CHEMICAL PROPERTIES

Ion Exchange Capacity	eq/l kgr/ft ³	≥ 0.85 ≥18.5
Ionic Form: OH ⁻ CO ₃ ⁻ Cl ⁻	eq%	≥ 95 ≤ 5 ≤ 1
Water Content	%	58 – 68
Bulk density	g/l lb/ft ³	~650 ~ 40.6
Physical form		Light yellow beads, translucent
Beads structure		Porous
Matrix		Styrene-DVB
Functional group		Trimethyl Ammonium groups, Type I
Effective size **	mm / inch	≥ 0.42 / 0.0165
Total swelling (Cl ⁻ to OH ⁻)	%	23
Outlet Resistivity* as: Single bed Mixed bed	MΩ•cm	≥ 15 ≥ 18
ΔTOC* as: Single bed Mixed bed	ppb	≤ 5 ≤ 3

* Resistivity and TOC rinse performance measured after 3 hrs. at 20 BV/h with rinse water ≥17.5 MΩ•cm.

** Uniformity coefficient max. 1.6



OPERATING CONDITIONS

Max operating temperature (Cl ⁻ / OH ⁻)	°C °F	80 / 60 176 / 140
pH operating range	pH	0 – 14
Minimum Bed Depth	mm Inch	800 31.5
Service flow rates	BV/h gpm/ft ²	10 – 60 4.1 – 24.6
Regenerant		NaOH
Regenerant Concentration	%	2 - 5
Regenerant level	g/l Lb/gal (US)	50 – 200 0.42 – 1.67
Regenerant flow rate	m/h ft/h	2 – 8 6.6 – 26
Total rinse requirement	BV	2 - 10
Max pressure drop	bar psig	1.5 21

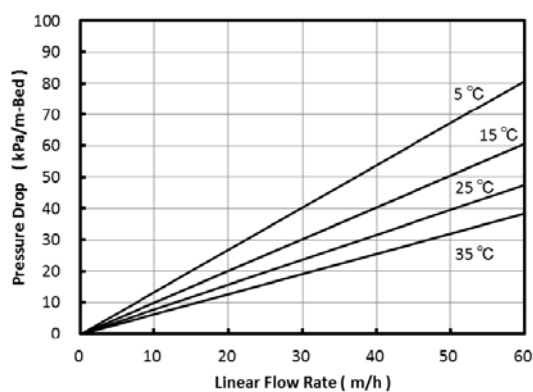


Fig. 1 Pressure Drop

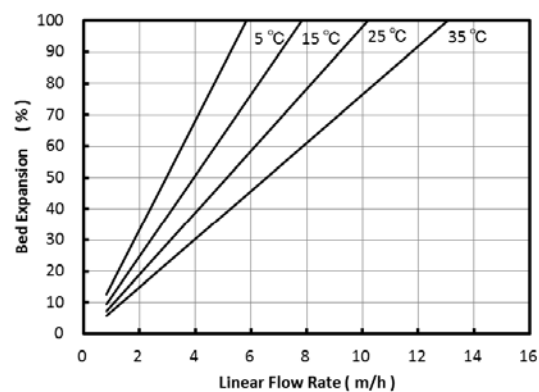


Fig. 2 Bed Expansion

Note:

The values in this document are for guidance only. Ovivo excludes liability for the information in this document.

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