

The background of the central section is a close-up photograph of numerous small, spherical resin beads. The beads are arranged in a grid-like pattern and have a translucent, yellowish-gold color. The lighting creates highlights and shadows, giving them a three-dimensional appearance.

# **OVIVO Resins**

**OvivUP™ - M020**

**Premium Grade  
Mixed Bed  
Ion Exchange Resin  
for UPW Plants**

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## Overview

OvivUp™ - M020 Mixed Bed Ion Exchange Resin is specially conditioned and rinsed for producing Semiconductor grade UPW with the highest quality standards (resistivity  $\geq 18.2 \text{ M}\Omega\cdot\text{cm}$  and TOC  $\leq 1 \text{ ppb}$ ). Ovivo resins are characterized by very low Boron, metals and TOC leaks as well as very small rinse water volumes.

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-M020

### PHYSICAL AND CHEMICAL PROPERTIES

Description	Unit	OvivUP-C020	OvivUP-A020
Ion Exchange Capacity	eq/l kgr/ft <sup>3</sup>	$\geq 1.7$ $\geq 37$	$\geq 0.9$ $\geq 19.5$
Ionic Form:	eq%	$\geq 99.9 \text{ H}^+$	$\geq 95 \text{ OH}^-$ $\leq 1 \text{ Cl}^-$
Water Content	%	50 - 60	62 - 72
Bulk density	g/l lb/ft <sup>3</sup>	~690 – 700 ~43.0 – 43.7	
Physical form		Brown transparent beads,	White – yellow transparent beads
Beads structure		Gel	
Matrix		Cross-linked polystyrene	
Functional group		Sulfonic acid	Quaternary Ammonium, Type I
Effective size **	mm / inch	0.45 / 0.0177	
Outlet Resistivity* as: Single bed Mixed bed	$\text{M}\Omega\cdot\text{cm}$	$\geq 16$	$\geq 18$
		$\geq 18.1$	
$\Delta\text{TOC}^*$ as: Single bed Mixed bed	ppb	$\leq 2.5$	$\leq 2$
		$\leq 1$	
Metals content *	ppb/g dry resin	Available on request / Typical values < 1000	
Metal leaks in UPW	ppt	Available on request. Typical values: < 0.5 each after 500 BVs < 0.1 each achievable under normal operation conditions	

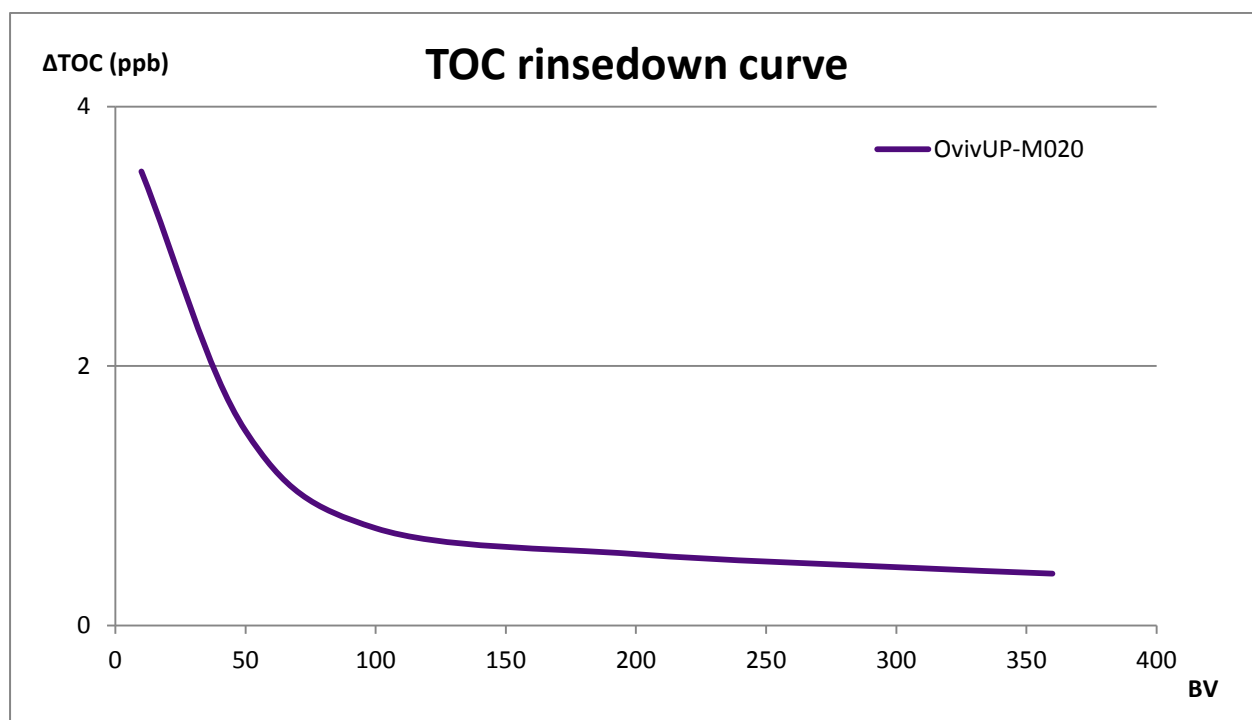
\* Resistivity, TOC and Metals rinse performance measured after 12 hrs. at 30 BV/h with  $\geq 17.5 \text{ M}\Omega\cdot\text{cm}$  rinse water.

\*\* Uniformity Coefficient max. 1.6



## OPERATING CONDITIONS

Max operating temperature	°C °F	60 140
Service flow rates	BV/h gpm/ft <sup>2</sup>	10 – 80 4.1 – 32.8
Min bed depth	mm Inch	800 32
Max pressure drop	bar psig	1.5 21



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