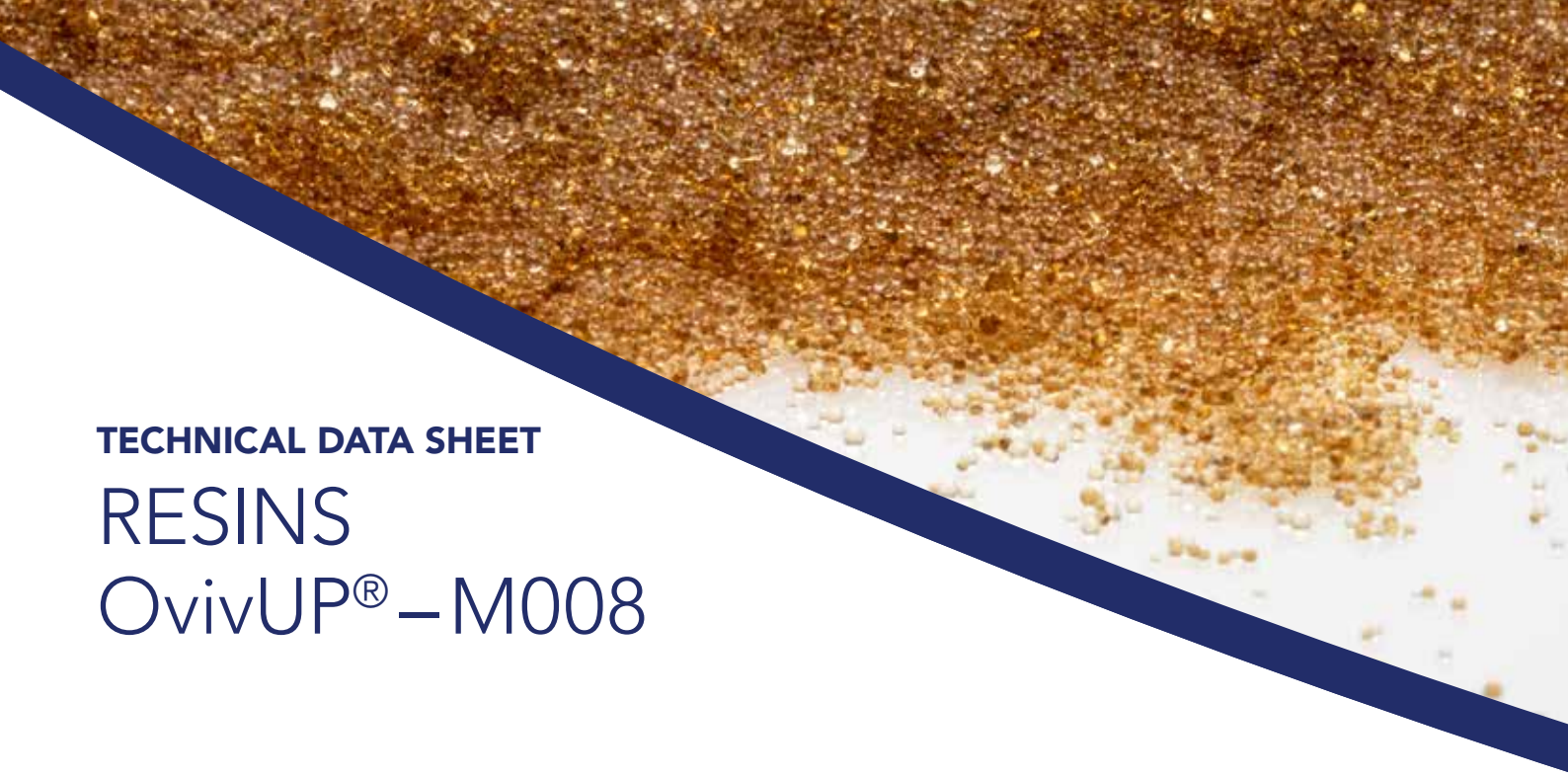

TECHNICAL DATA SHEET

RESINS
OvivUP®–M008

GENERAL INFORMATION

OvivUP – M008	
PURPOSE	• Ultrapure grade mixed bed ion exchange resin. Strong acid cation and strong base anion resins designed for Polishing or Make-up mixed bed ion exchange applications in Ultrapure Water systems. • OvivUP – M008 is especially conditioned and rinsed for producing semiconductor grade Ultrapure Water with high quality standards. The high quality of this resin is achieved by using very high grade Ultrapure Water (following IRDS guidelines) for the cleaning and rinsing of the resin during the manufacturing process.
TYPE	Mixed (cation exchange resin and anion exchange resin)
MATRIX	Styrene-DVB copolymer, gel
PHYSICAL FORM	Translucent spherical beads
INSTALLATION	• The optimum performance from any mixed bed unit can only be achieved if the resin is loaded, commissioned and operated correctly. • All equipment has to be thoroughly decontaminated using the highest quality ultrapure rinse water to avoid contamination of the resin by either foreign matter or different resin types. • Ensure the resin level conforms to the plant design and always use Ultrapure water for the filling, commissioning and rinsing steps. • We recommend using a hydraulic ejector or manual loading through the top manway or top filling flange. • After filling, we recommend mixing the resin with nitrogen (N_2) to ensure homogeneous mix of cation and anion resins, which might slightly separate during filling process. • Initiate flow and monitor TOC and resistivity rinse curves until the ultimate water quality has been achieved and stabilized. • Resin is delivered from the factory in an ultrapure and clean condition therefore only small rinse water volume is necessary during the installation to rinse to quality. Once resin packaging is open and resin is exposed to ambient air conditions, ensure to limit the exposure time to avoid partial resin exhaustion with ambient carbon dioxide (CO_2).

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OvivUP – M008 (continued)	
OPERATION	• One way resin, non-regenerable. • OvivUP ion exchange resin can't be stored for a long time in a service vessel as bacterial growth could occur during standstill conditions. Thus the resin should at least (and permanently if possible) be kept rinsed.
PACKAGING	OvivUP – M008 resin is packed in a 3-layer gas barrier packaging (25 liters).
STORAGE	• OvivUP – M008 resin is sensitive to temperature. Protect from frost and store away from direct sun light, in a cool and dry place. • Keep product in its original closed packaging until use and away from incompatible materials such as strong oxidizing agents. • Recommended maximal storage time is 1 year.
SHIPPING DENSITY	710 g/l

SPECIFICATIONS

EFFECTIVE SIZE	mm in	≥ 0.4 ≥ 0.0157
UNIFORMITY COEFFICIENT		≤ 1.6
BULK DENSITY	g/l lb/ft³	± 710 ± 44.3
OUTLET RESISTIVITY (MIXED BED) [1) 2)]	MΩ·cm	≥ 18
ΔTOC (MIXED BED) [1) 2)]	ppb	≤ 3

1) Typical values in service. Detailed reports of analysis for all batches of OvivUP – M008 resins are available for each delivery, thus to insure that the delivered product meet stringent UPW performance requirements and is of the highest quality.
2) Resistivity and TOC metals rinse performance measured after 12 hours at 30 BV/h with ≥ 17.5 MΩ·cm rinse water.

TYPICAL PROPERTIES

		EXCHANGE RESIN CATION	EXCHANGE RESIN ANION
FUNCTIONAL GROUP		Sulfonic acid	Quaternary Ammonium, Type I
COLOUR		Dark amber	Light yellow
WATER CONTENT	%	50 – 60	62 – 72
ION EXCHANGE CAPACITY	eq/l	≥ 1.7	≥ 0.9
IONIC FORM	eq%	≥ 99 H^+	≥ 95 OH^- ≤ 1 Cl^-

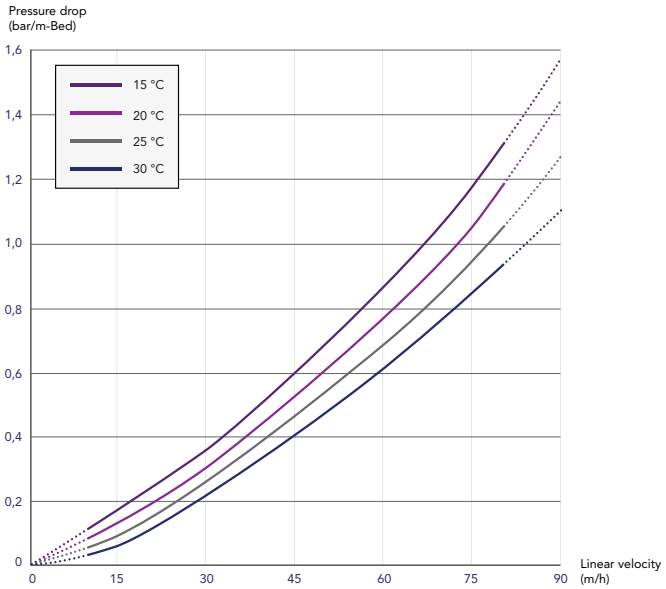
Cation and anion components for the OvivUP – M008 cannot be provided separately.

OPERATING PARAMETERS

MAXIMUM OPERATING TEMPERATURE	60 °C	140 °F
SERVICE FLOW RATE	10 – 80 m/h	4.1 – 32.7 gpm/ft²
MINIMUM BED DEPTH	800 mm	31 ½ in
MAXIMUM PRESSURE DROP	1.5 bar	21 psig

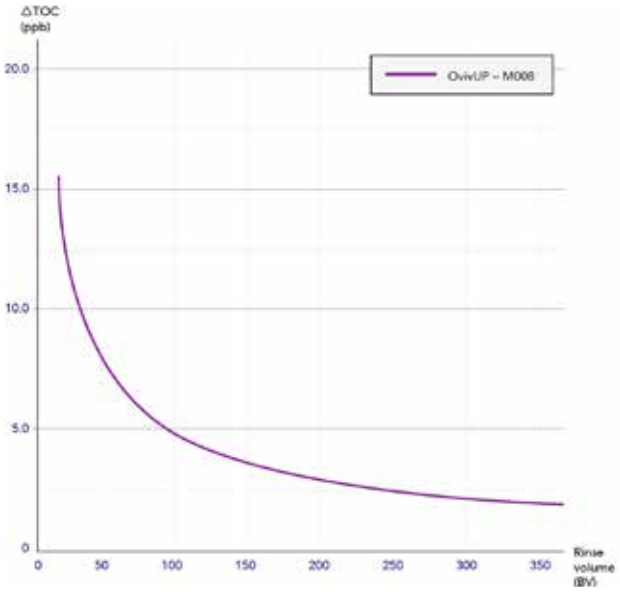
HYDRAULIC CHARACTERISTICS

PRESSURE DROP

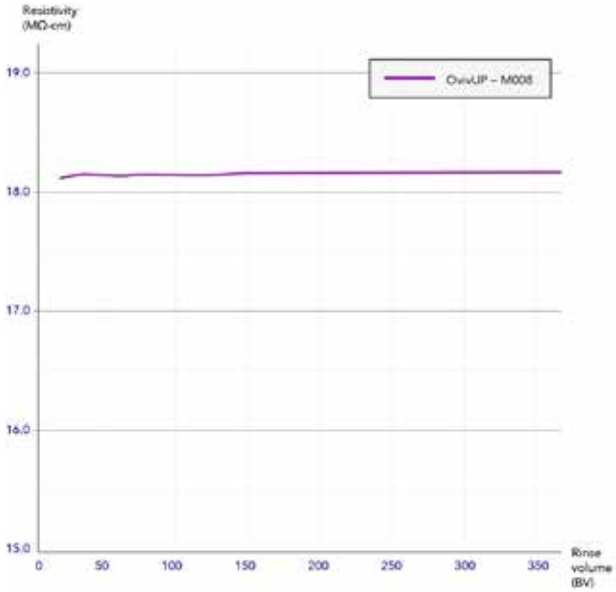


TYPICAL TOC RINSE AND RESISTIVITY PERFORMANCE

TOC RINSE DOWN CURVE



RESISTIVITY



QUALITY

ISO 9001:2015

- The production of the OvivUP – M008 is certified according to ISO 9001:2015.

ISO 14001:2015

- The manufacturing site of the OvivUP – M008 is certified according to ISO 14001:2015 for environmental management systems.

OTHER INFORMATION

DISPOSAL	Disposal must be in accordance with the appropriate local regulations.
SAFETY ADVICE	• Eye contact can cause serious irritation. • High risk of slipping due to spillage of the product.
GLOBAL KNOWLEDGE CENTRE	Ovivo Switzerland AG Benkenstrasse 262 4108 Witterswil Switzerland