

3M™ Metal Ion Purifiers

3M™ Metal Ion Purifiers are designed to reduce metal ions in high purity solvent systems to the sub 50ppt level. Utilizing 3M's immobilized particle technology, which is comprised of either a strong acid cation exchange resin or a chelating ion exchange resin in a polyethylene matrix, 3M Metal Ion Purifiers provide effective, single pass reduction of metal ions from high purity resins and solvents, such as PGMEA, TMAH, BARC, and other lithography chemistries.

Applications

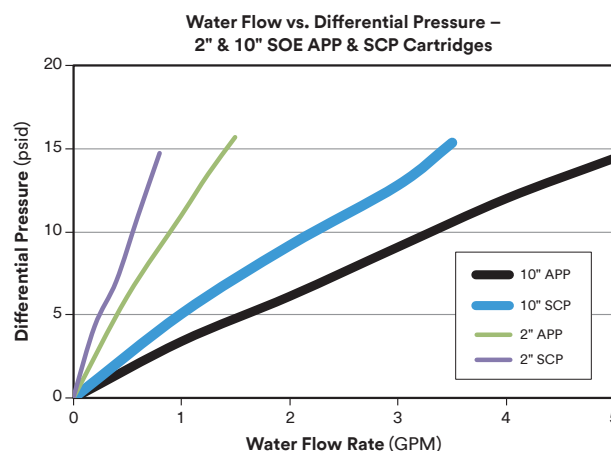
Intended for use in:

- High Purity Chemicals
- Photolithography Chemicals
 - Solvents
 - Resins
 - Polymers



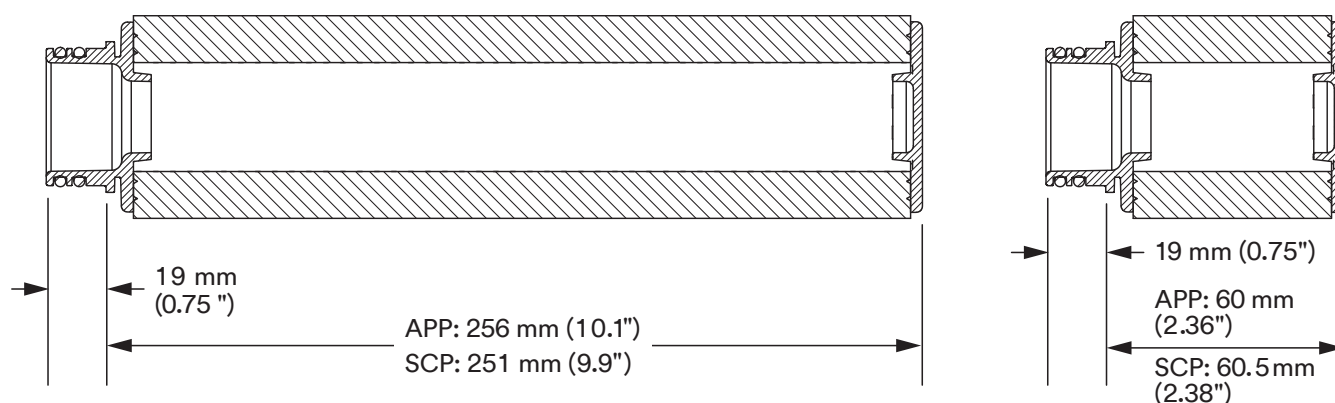
Features	Benefits
3M's Immobilized Particle Technology	<ul style="list-style-type: none"> • Effective reduction of metal ions to <50ppt • Higher capacity when compared to membrane purifiers
Long Path Length	<ul style="list-style-type: none"> • Tortuous path with high internal surface area of the 3M media matrix • Depth of the 3M media provides increased residence time for IX – fluid as compared to membrane purifiers
Fixed Media Matrix	<ul style="list-style-type: none"> • No channeling of the chemistry • Efficient reduction of metal ions

10" Cartridge	SCP	APP
Materials of Construction		
Binder Resin	Ultrahigh Molecular Weight Polyethylene (UHMWPE)	
End Caps	High Density Polyethylene (HDPE)	
O-rings	Perfluoroelastomer (FFKM)	
Ions Exchange	Strong Acid Cation Exchange (H-form)	Chelating Resin Amino Phosphate
Operating Conditions		
Maximum Forward Differential Pressure	40 psid (2.8 bar)	
Maximum Operating Temperature	140°F (60°C)	
Recommended Flow Rate (1cP fluid)		
	0.9 gpm (3.5 lpm)	
Typical Metal Ion Exchange Capacity (90% efficiency at recommended flow rate)		
	450 mEQ/10"	460 mEQ/10"



3M™ Metal Ion Purifiers Ordering Guide

Model Number	3M ID Number	Description
MIRE-0100FK-SCPD	JN-7220-3262-8	10" Metal Ion Purifier SCP with 222 connector, flat cap and perfluoroelastomer o-rings
MIRE-0100FK-APPD	JN-7220-3264-4	10" Metal Ion Purifier APP with 222 connector, flat cap and perfluoroelastomer o-rings
MIRE-0020FK-SCPD	JN-7220-3268-5	2" Metal Ion Purifier SCP with 222 connector, flat cap and perfluoroelastomer o-rings
MIRE-0020FK-APPD	JN-7220-3269-3	2" Metal Ion Purifier APP with 222 connector, flat cap and perfluoroelastomer o-rings
MIR-DA47-SCPD	JN-7220-3266-9	47 mm Metal Ion Purifier SCP lab disc
MIR-DA47-APPD	JN-7220-3267-7	47 mm Metal Ion Purifier APP lab disc



3M™ Metal Ion Purifiers are intended for use in high purity and photolithography chemicals. They should not be used in potable water, food and beverage, and pharmaceutical applications.

Do not use the Purifiers for applications which are chemically incompatible with the Purifier's materials of construction. Strong oxidizing agents such as nitric acid attack organic ion exchange resin under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (fire or explosion).

The 3M Metal Ion Purifier is not designed to function as a particulate filter and should be installed upstream of a membrane filter suitable for the intended application.

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