

# 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

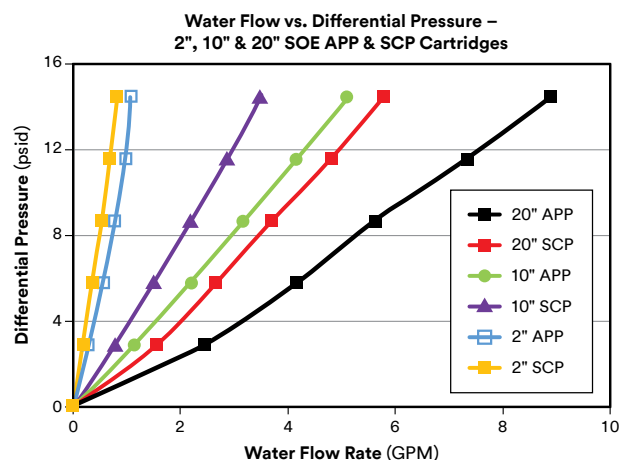
Intended for use in:

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



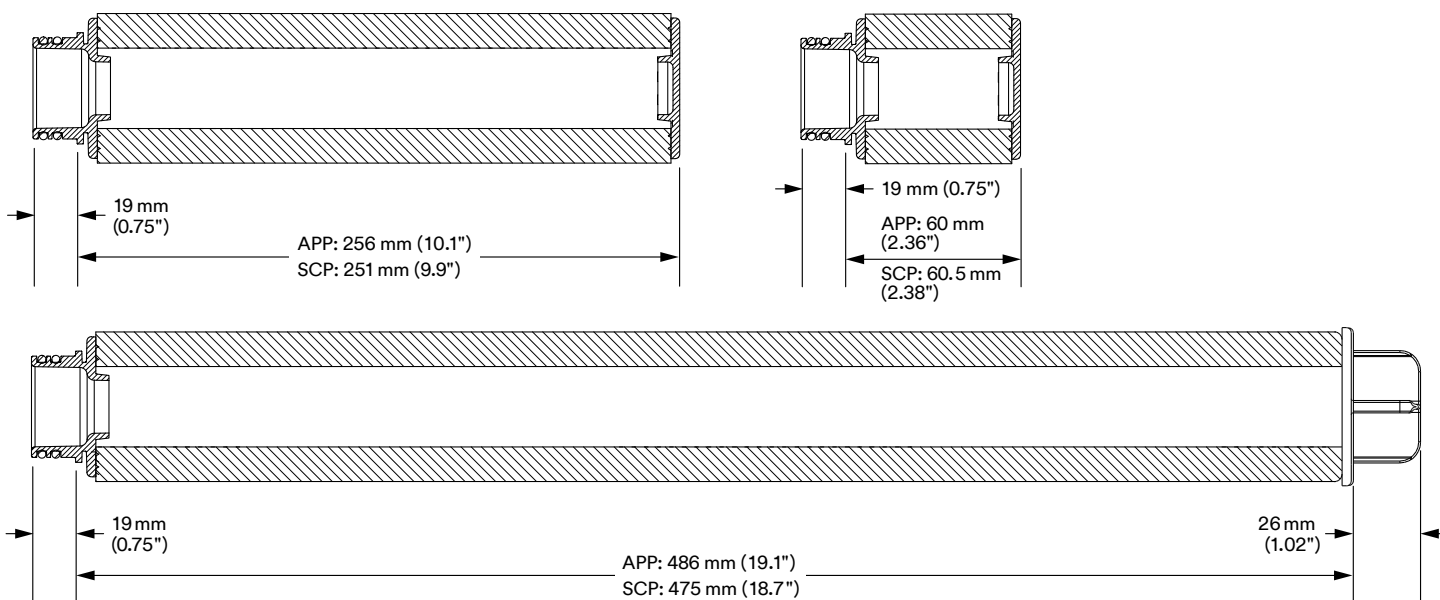
Features	Benefits
3M's Immobilized Particle Technology	<ul style="list-style-type: none"> <li>• Effective reduction of metal ions to &lt;50ppt</li> <li>• Higher capacity when compared to membrane purifiers</li> </ul>
Long Path Length	<ul style="list-style-type: none"> <li>• Tortuous path with high internal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

	SCP	APP
<b>Materials of Construction</b>		
Binder Resin	Ultrahigh Molecular Weight Polyethylene (UHMWPE)	
End Caps	High Density Polyethylene (HDPE)	
O-rings	PTFE encapsulated fluoropolymer	
Ions Exchange	Strong Acid Cation Exchange (H-form)	Chelating Resin Amino Phosphate
<b>Operating Conditions</b>		
Maximum Forward Differential Pressure	40 psid (2.8 bar)	
Maximum Operating Temperature	140°F (60°C)	
<b>Recommended Flow Rate per 10" (1cP fluid)</b>		
	0.9 gpm (3.5 lpm)	
<b>Typical Metal Ion Exchange Capacity (mEQ) (Static Method)</b>		
47 mm disc	8.2	11
2" Cartridge	100	120
10" Cartridge	510	630
20" Cartridge	960	1300



## 3M™ Metal Ion Purifiers Ordering Guide

Model Number	3M ID Number	Global ID	Description
MIR-DA47-APPD	JN-7220-3267-7	7100176307	47 mm Metal Ion Purifier APP lab disc
MIR-DA47-SCPD	JN-7220-3266-9	7100176306	47 mm Metal Ion Purifier SCP lab disc
MIRE-0020FK-APPD	JN-7220-3269-3	7100176309	2" Metal Ion Purifier APP with 222 connector, flat cap and PTFE encapsulated fluoropolymer
MIRE-0020FK-SCPD	JN-7220-3268-5	7100176308	2" Metal Ion Purifier SCP with 222 connector, flat cap and PTFE encapsulated fluoropolymer
MIRE-0100FK-APPD	JN-7220-3264-4	7100172011	10" Metal Ion Purifier APP with 222 connector, flat cap and PTFE encapsulated fluoropolymer
MIRE-0100FK-SCPD	JN-7220-3262-8	7100172012	10" Metal Ion Purifier SCP with 222 connector, flat cap and PTFE encapsulated fluoropolymer
MIRE-0200HK-APPD	UU-0118-5604-2	7100278678	20" Metal Ion Purifier APP with 222 connector, spear cap and PTFE encapsulated fluoropolymer
MIRE-0200HK-SCPD	UU-01185-603-4	7100278677	20" Metal Ion Purifier SCP with 222 connector, spear cap and PTFE encapsulated fluoropolymer



**Intended Use and Product Selection:** 3M Metal Ion Purifiers are intended for use in industrial filtration applications of aqueous fluids in accordance with the applicable product instructions and specifications. 3M Metal Ion Purifiers are also intended for use with non-aqueous fluids where materials of construction are compatible. Since there are many factors that can affect a product's use, the customer and user remain responsible for determining whether the 3M product is suitable and appropriate for the user's specific application, including user conducting an appropriate risk assessment and evaluating the 3M product in user's application.

**Restrictions on Use:** 3M advises against the use of these 3M products in any application other than the stated intended use(s), since other applications have not been evaluated by 3M and may result in an unsafe or unintended condition. Do not use in any manner whereby the 3M product, or any extractable or leachable from the 3M product, may become part of or remains in a medical device, drug, cosmetic, supplement, infant formula; or in applications involving life-sustaining medical applications or prolonged contact with internal bodily fluids or tissues. 3M Metal Ion Purifier products are not for use in food contact applications.

**Technical Information:** The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

**Product Selection and Use:** Many factors beyond 3M's control and uniquely within users knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

**Warranty, Limited Remedy, and Disclaimer:** Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:** Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.



**3M Purification Inc.**  
**3M Separation and Purification Sciences Division**  
 3M Center, St. Paul, MN 55144-1000 USA

**Phone** 1-800-243-6894 1-203-237-5541  
**Web** www.3M.com/purification

3M is a trademark of 3M Company.  
 Please recycle. Printed in the U.S.A.

© 2022 3M Company. All rights reserved.  
 70-2016-0017-1 REV0722