



# Installation and Operation Instructions for 3M™ Betafine™ PEG Series Filter Cartridges

## NOTICE

Please read, understand, and follow all safety information contained in these instructions prior to the use of any 3M™ Betafine™ PEG Series Filter Cartridge. Retain these instructions for future reference. Failure to follow all guides and rules could cause personal injury or property damage.

### Intended Use(s):

3M Betafine PEG Series filter cartridges are used for filtering fluids for the purpose of reducing particulate from fluids used in electronics processes, such as: ultrapure water, solvents and photolithography chemistries, in accordance with the applicable product instructions and specifications.

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 the user conducting an appropriate risk assessment and evaluating the 3M product in the user's application.

### Restrictions on Use(s):

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, potable water, or food & beverage additives or products; or in applications involving life-sustaining medical applications or prolonged contact with internal bodily fluids or tissues. If you are considering using this 3M product for a restricted use, you must first contact 3M with information about your proposed application to request prior written authorization for supply for such use.

## WARNING

**To reduce the risks associated with chemical exposure which, if not avoided, could result in minor or moderate injury:**

- Depressurize the system prior to installation and prior to removal.

## CAUTION

**To reduce the risks associated with chemical exposure which, if not avoided, could result in minor or moderate injury:**

- Always use appropriate personal protective equipment (PPE), including eye and face protection, protective gloves during filter change out and startup.
- Do not use a cartridge that has been damaged or has damaged components.
- Do not modify the cartridge or its components.

**To reduce the risks associated with environmental contamination which, if not avoided, could result in minor or moderate injury:**

- At the end of useable life, dispose of cartridge in accordance with applicable local, state, and federal regulations or laws.

## Filter Packaging

3M membrane filters are double-bagged for cleanroom service and should remain packaged until installation. Inspect, but do not remove the filter from the protective bags unless you are in a clean environment. Contact your 3M Representative or Technical Support with any concerns.

## Installation

1. Remove the filter from the box and carry the filter into a designated production area.
2. Remove the outer protective bag and discard.
3. Carefully cut the inner protective bag near the O-ring base and slide back to just expose the O-rings.  
**Note: DO NOT remove the filter cartridge from the inner bag.**
4. Wet the cartridge O-rings and housing receptor with the process fluid.
5. Grasp the filter with both hands, place the open end of the filter into the housing receptor and press straight into place while twisting.
6. Remove bag and inspect cartridge for proper seating in housing receptor. Repeat these steps until all filters are installed.
7. Close the housing and verify all connections are leak tight.
8. Start the fluid flow and fill the filter housing.
9. Vent the upstream side of the filter housing.
10. After all trapped air has been removed, close vent and the filter is ready for use.

### **WARNING**

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- Depressurize the system prior to installation and prior to removal.

## Removal & Disposal

1. Isolate the housing by closing all inlet and outlet valves.
2. Depressurize the housing by opening the drain valve. Open the vent valve if that is available on the housing.
3. Allow the fluid to drain from the housing.
4. Open the housing.
5. Remove filter, and dispose of used filters in accordance with federal, state, and local laws and regulations.

## Filter Cartridge Operating Parameters & Specifications

3M™ Betafine™ PEG Series Filter Cartridges		
Component		
Membrane	Graded porosity polypropylene	
Cage, Core, Ends Caps, Support Layers	Polypropylene	
Dimensions		
Filtration Surface Area	Grades 060, 120, 250	8.8 ft. <sup>2</sup> (0.82 m <sup>2</sup> )
Per 10" equivalent	Grade 020	8.1 ft. <sup>2</sup> (0.75 m <sup>2</sup> )
	Grade 500	8.6 ft. <sup>2</sup> (0.80 m <sup>2</sup> )
	Grade 10C	5.5 ft. <sup>2</sup> (0.51 m <sup>2</sup> )
Outside Diameter (nom)	2.75 in. (7 cm)	
Length	10, 20, 30 and 40 in.	
	(25.4, 50.8, 76.2, 101.6 cm)	
Operating Parameters		
Maximum Operation	130°F (60°C) continuous	
Temperature	175°F (80°C) short term	
Maximum Forward Differential Pressure	60 psid at 77°F (4 bar at 25°C)	



**Product Use:**

Many factors beyond 3M's control and uniquely within user's 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**

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