

Whatman Puradisc 25 mm RC Syringe Filters

Product Information Sheet

Introduction

Important

Read these instructions carefully before using the products.

Intended use

The products are intended for research use only, and shall not be used in any clinical or *in vitro* procedures for diagnostic purposes.

Safety

For use and handling of the products in a safe way, either refer to the Safety section in these instructions or to the Safety Data Sheets where applicable.

Description

Whatman™ Puradisc 25 mm RC Syringe Filters have been designed to provide pure filtration of solvents, chemicals, aqueous, and non-aqueous solutions and samples. They consist of a regenerated cellulose (RC) membrane with a polypropylene (PP) housing.

Disposable filtration devices provide great labor saving efficiency while ensuring consistent filtration when compared to hand assembled filter housings.

This document provides general information on Puradisc 25 mm RC Syringe Filters. The specifications in the Technical Data section are intended to provide the basis for establishing functional use, as well as setting quality assurance test performance levels.

- Regenerated Cellulose membrane
- Solvent Resistant Membrane
- Polypropylene Housing
- Rugged Construction
- Autoclavable
- Two Pore Sizes Available
- Inlet: Female Luer Lock (FLL)
Outlet: Male Slip Luer (ML)
- Integrity Testable BP or WBT (*in-situ*)

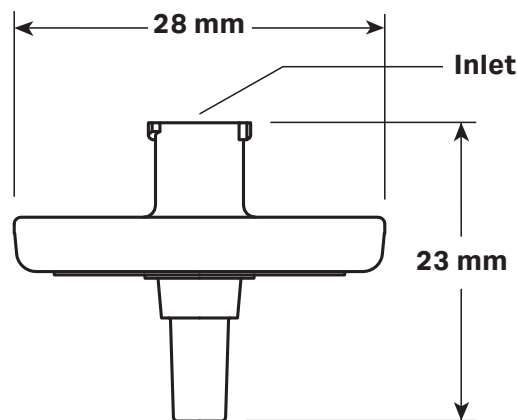
Regenerated Cellulose (RC) Membrane

Regenerated Cellulose is a hydrophilic membrane that is resistant to a wide range of solvents. This membrane is suitable for use with aqueous or organic solvents. This membrane has low extractables profile and very low protein binding capacity, which makes it an excellent choice for protein recovery applications.

Typical applications

- Capillary electrophoresis
- HPLC / uHPLC Sample Prep
- Protein Analysis
- Refractometry
- UV/VIS analysis
- Tissue Culture

Technical Data



Connectors:	Inlet - Female Luer Lock (FLL) Outlet - Male Slip Luer (ML)
Weight:	Approximately 2.7 grams
Filtration Area:	Approximately 4.2 cm ²
Maximum Pressure:	5.2 bar (75 psi)
Housing:	Polypropylene (PP)
Filter Media:	Regenerated Cellulose (RC)
Hold-Up Volume:	Full housing 0.16 mL with air purge < 0.1 mL
Flow Direction:	Flow should enter from the inlet
Sterilization:	Autoclave at 121°C (131°C max) for 20 minutes

Operating instructions

Safety

When considering the specific factors of your application, refer to Technical data for correct use. Do not exceed the pressure, temperature, or chemical compatibility recommendations.

High pressures can be obtained when using syringes. The smaller the syringe, the higher the pressure that can be generated. As general guideline, the following pressures can be obtained by hand with the syringes indicated:

Syringe size	20 mL	10 mL	5 mL	3 mL	1 mL
Pressure obtained by hand	80 psi	140 psi	180 psi	200 psi	250 psi

Determine the pressure generated by hand with a specific size syringe and take appropriate safety precautions not to exceed the recommended rating for the device used.



CAUTION

If the Maximum Pressure is exceeded, bursting of the device may occur resulting in loss of sample or personal injury.

Efficiency

To maximize filtration throughput, use the largest pore size filter that will provide the required purity. To extend filter life, use low flow rates or pressures.

Air locks

Air locks can seriously limit flow rates. To eliminate, point the outlet of the filter device upward during the initiation of liquid flow.

To filter a solution with a syringe

Follow these steps to filtrate a solution using a syringe.

Step	Action
1	Fill the syringe with the solution to be filtered.
2	Secure the filled syringe to the FLL inlet of the syringe filter with a twisting motion.
3	With the outlet pointed upward, gradually apply thumb pressure to the syringe plunger to initiate flow.
4	Continue thumb pressure until all the air in the device is displaced with liquid.
5	Once liquid starts to exit the syringe filter from the outlet, stop applying pressure, point device downward and away from user.
6	Orientate syringe filter over a suitable collection container or other apparatus and apply pressure again to filter sample.

Integrity test

Bubble point test

Follow these steps to perform a bubble point test if required for your application.

Step	Action
1	Flush the filter device with 1.0 mL or more of the test fluid.
2	After the filter is completely wet, with the outlet pointed upward, apply air under controlled pressure to the inlet until air breaks through the filter and bubbles can be seen at the outlet.
3	The pressure at which air passes through the wetted filter is the bubble point.

Refer to the table for typical bubble point values.

Water Breakthrough Test

Water Breakthrough Test is a Pressure Hold Test. Sterile water is recommended for "in-situ" testing of critical applications.

Follow these steps to perform a water breakthrough test.

Step	Action
1	Hold the rated pressure for 15 seconds.
2	Shake or use vacuum to remove test water.

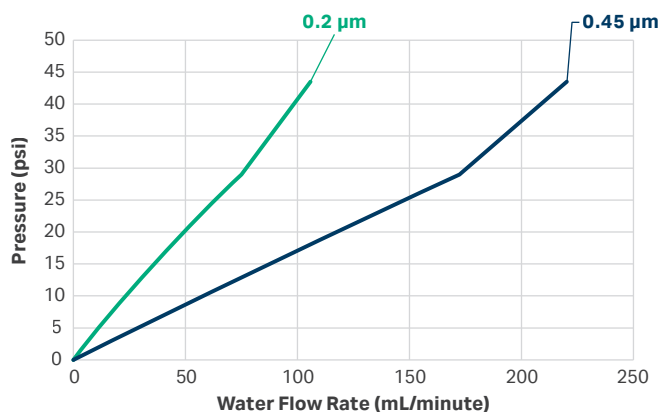
Refer to the table for typical Water Breakthrough values.

Integrity Test Data

Bubble Point determined with Water.

Description	Pore Size (µm)	Minimum Bubble Point (psi)	Water Breakthrough (psi)
RC	0.2	50	N/A
RC	0.45	36	N/A

Typical Water Flow Rates for Puradisc 25 mm RC Syringe Filters



Chemical compatibility of membrane and housing

Solvent	PP	RC
Acetic Acid, 5%	R	R
Acetic Acid, Glacial	R	NR
Acetone	R	R
Acetonitrile	R	R
Ammonia, 6N	R	LR
Amyl Acetate	R	R
Amyl Alcohol	R	R
Benzene ¹	L	R
Benzyl Alcohol ¹	R	R
Boric Acid	R	R
Butyl Alcohol	R	R
Butyl Chloride ¹	NR	-
Carbon Tetrachloride ¹	L	R
Chloroform ¹	L	R
Chlorobenzene ¹	-	R
Citric Acid	-	R
Cresol ¹	R	R
Cyclohexane ¹	R	R
Cyclohexanone	R	R
Diethyl Acetamide	R	R
Dimethyl Formamide	R	LR
Dioxane	R	R
DMSO	R	LR
Ethanol	R	R
Ethers ¹	R	R
Ethyl Acetate	R	R
Ethylene Glycol	R	R
Formaldehyde ¹	R	R
Formic Acid	R	LR
Freon TF ¹	R	-
Hexane	R	R
Hydrochloric Acid, Conc ¹	L	NR
Hydrofluoric Acid ¹	L	NR
Isobutyl Alcohol	R	R
Isopropyl Acetate	R	R
Methanol	R	R
Methyl Ethyl Ketone	R	R
Methylene Chloride ¹	L	R
Nitric Acid, Conc ¹	NR	NR
Nitric Acid, 6N ¹	L	LR
Nitrobenzene ¹	R	R
Pentane ¹	L	R
Perchloro Ethylene ¹	R	R
Phenol 0.5%	R	R
Pyridine	R	R
Sodium Hydroxide, 6N	R	NR
Sulfuric Acid, Conc ¹	NR	NR
Tetrahydrofuran ¹	L	R
Toluene ¹	L	R
Trichloroethane ¹	R	R

Solvent	PP	RC
Trichloroethylene ¹	R	R
Water	R	R
Xylene ¹	L	R

¹ Short Term Resistance of Housing

Legend: R = Resistant; LR = Limited Resistant; NR = Non Resistant.

The above data is to be used as a guide only. Testing prior to application is recommended.

Product table: Puradisc 25 mm RC Syringe Filters

Product Number	Product Name	Pore Size (µm)	Media	Qty./Pkg.
6756-2502	Puradisc 25 RC	0.2	RC	50
6757-2502	Puradisc 25 RC	0.2	RC	200
6758-2502	Puradisc 25 RC	0.2	RC	1000
6756-2504	Puradisc 25 RC	0.45	RC	50
6757-2504	Puradisc 25 RC	0.45	RC	200
6758-2504	Puradisc 25 RC	0.45	RC	1000

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