

# Waters

## Syringe Filter Packs



### GHP Syringe Filter

The GHP syringe filter has been designed to be the 'universal' syringe filter for all analytical filtration requirements. Its all-polypropylene construction, including a hydrophilic polypropylene membrane, provides superior chemical compatibility and maximum versatility for use in all HPLC solvent/sample filtration - from harsh aqueous solution to organic solvent-based solutions. The polypropylene membrane is low protein binding, and the filter is HPLC certified for low UV-absorbing extractable. It may be used alone or in a series or in series with another syringe filter.

### Ordering Information

Product Number	Description	Pore Size	Size
<a href="#">GHP Syringe Filters</a>			
WAT200829	GHP Acrodisc	0.45 $\mu\text{m}$	25mm

### Specifications

Filter Media: GH Polypro (hydrophilic polypropylene),

Filter Housing: polypropylene except for Versapor syringe filter-modified acrylic

Filter Diameter: 25 mm

Fluid Retention (with air purge):

25 mm < 100 $\mu\text{m}$

Connection: Female luer lock inlet/male luer outlet or minispikes outlet

Maximum Operating Pressure:

GHP 6.9 bar (100 psi)

Maximum Operating Temperature:

GHP 55° C (131° F)

#### Instruction for Use

- 1) Before filling the syringe with sample solution, draw approximately 1 mL of air into to syringe. This will allow air to follow the sample out of syringe. This "Air Purge" minimizes fluid retention within the filter device.
- 2) Fill the syringe with solution to be filtered. CAUTION: use of syringes smaller than 10 mL can generate excessive pressure on the filter which may exceed maximum operation pressure. Exceeding the maximum operation pressure may result in membrane or housing rupture.
- 3) Holding the filter device in one hand, and the filled syringe in the other, secure (without excessive force) the filled syringe to the filter device with a twisting motion.
- 4) Apply gentle thumb pressure to begin filtration (gentle pressure assures maximum throughput). NOTE: As the filter removes particulate, filtration will become more difficult (the syringe plunger will be harder to use) as pressure rapidly increases on the filter. Change filters when resistance becomes excessive. Failure to change filter may result in housing rupture as the maximum operating pressure is exceeded, or membrane rupture, which results in particulate contaminating the filtrate.
- 5) For aqueous solution filtration, pre-wet the hydrophobic PTFE membrane with alcohol. Discard first 5 mL to avoid alcohol contamination.
- 6) These filters are for Single Use Only.

#### Solvent Compatibility Data

The materials used in the manufacturing of filtration products are carefully chosen for their resistance to a wide range of chemical solution. Understanding the compatibility between the fluid to be filtered and the filter elements is essential.

The Following test procedure was used: 2 mL of Solvent filtered; UV absorbance set at 254 nm. For these reagents marked with one asterisk (\*), the following test procedure was used: 2 mL of solvent filtered; UV absorbance set at 356 nm. In both cases, after filtration, membrane was integrity tested by the bubble point method.

SOLVENT	GHP
Acetic acid, glacial	R
Acetone	R*
Acetonitrile	R
Butanol	R
Chloroform	R
Dioxane	R
DMF	R*
DMSO	R*
Ethanol	R
Ethyl acetate	R
Ethyl ether	R
Freon TF	R
Hydrochloric acid (1N)	R
Hexane dry	R
Isopropanol	R
Methanol	R
Methylene Chloride	R
Methyl ethyl ketone	R
N-Methylpyrrolidone	R
Sodium hydroxide (5N)	R
THF	R
THF/Water (50/50 v/v)	R
Toluene	R
Water	R

## KEY

### R = RESISTANT

No significant changes were observed in flow rate or bubble point of the membrane nor visible indication of chemical attack.

### NR = NOT RESISTANT

The membrane is basically unstable. In most cases extensive shrinkage or swelling occurs. Filter may gradually weaken or partially dissolve after extended exposure.

### LR = LIMITED RESISTANT

Moderate Changes in physical properties of the membrane observed. The Filter may suitable for short-term non-critical use.

\* = INCOMPLETE DATA

## HPLC Certification

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Nylon, PVDF, PTFE, and GHP Syringe Filters are HPLC certified. HPLC certification means that the product has been integrity tested for compatibility with common HPLC solvents using established HPLC procedures. In addition, representative samples are tested using a highly sensitive HPLC technique to monitor U.V. absorbing extractables.

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