

Tekfil™ AY

Absolute Rated Nylon Depth Cartridge Filters

Tekfil™ AY is a high flow, graded depth filter with high contaminant capacity for long life. Constructed from FDA approved nylon with excellent performance characteristics, it is an economic choice for a wide range of applications.



Applications

Tekfil™ AY cartridges provide absolute filtration where the cost of filtration is critical. Suitable for the filtration of aqueous and organic liquids, Tekfil™ AY cartridges can be used as prefilters or final filters in the following applications:

- **Food and beverage**
Process water, polishing lines and clarification.
- **Pharmaceuticals**
Prefiltration and clarification.
- **Fine chemicals and solvents**
Process streams.
- **Coatings**
Coating lines, solvents, inks and dyes.
- **Photographic chemicals**
Emulsions and process water.
- **Metal finishing electroplating**
Paint and resin production.
- **Water treatment prior to reverse osmosis**
Resin traps and potable water.
- **Cosmetics product filling**
Water lines and batch filtration.



Features and Benefits

- Tekfil™ AY cartridges**
 Extensive research and selection of the latest and most advanced nylon meltblown filter media, results in improved performance, leading to extended filter life at a given efficiency.
- Graded depth media**
 The graded structure of the media provides prefiltration of the process fluid prior to the absolute rated final layer. This combination provides economy of use and a smaller process footprint.
- High degree of chemical compatibility**
 Constructed of nylon.
- Absolute removal ratings**
 Tekfil™ AY cartridges are validated using recognised industry standard test methods.
- Suitable for steam and hot water sanitisation**
 Tekfil™ AY cartridges are resistant to repeat steam sterilisation and hot water cycles.
- Environmentally friendly**
 Tekfil™ AY filters are environmentally friendly, all spent cartridges can be readily incinerated to trace ash.

Cartridge Construction

The high quality robust nylon construction of Tekfil™ AY cartridges, allows for excellent chemical compatibility with a wide range of fluids.

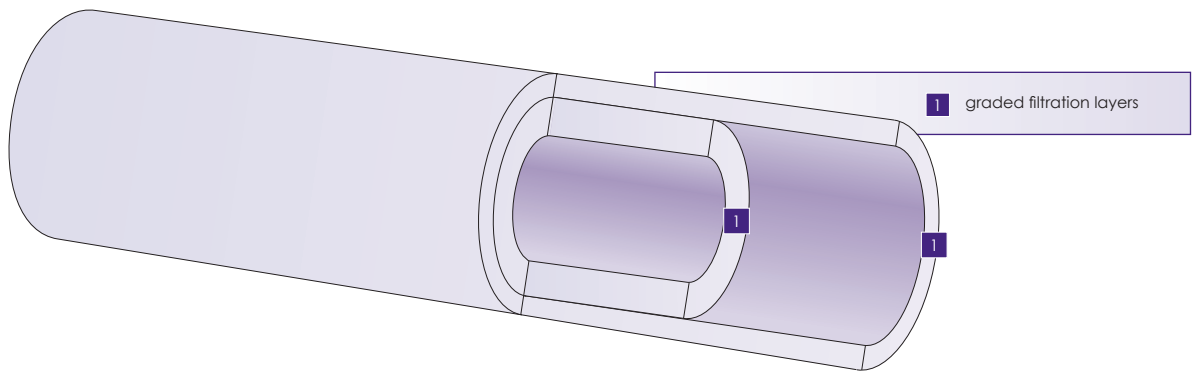
The meltblown nylon media provides a bonded matrix thus eliminating fibre migration.

The inherent structural stability of the Tekfil™, prevents 'channelling' and avoids the risk of particle unloading even under impulse conditions.

The Tekfil™ fusion bonded construction ensures cartridge integrity. No surfactants or bonding agents are used, minimising extractables.

Table 1 Particle Retention Rating

Code	Pore Rating (microns)	Absolute Rating 99.98% Beta 5000 (microns)
TAY01	1	0.9
TAY03	3	1.8
TAY05	5	2.6
TAY10	10	8
TAY25	25	20
TAY50	50	43
TAY75	75	70
TAY100	100	95



Specifications

Materials of Manufacture

Filter media:	Nylon
End fittings:	Nylon
Seals (if specified):	Silicon or EPDM

Cartridge Dimensions

Diameter:	63mm (2.5")
Length:	254mm (10"), 508mm (20"), 762mm (30"), 1016mm (40")

Gaskets and O-Rings

Ethylene Propylene, FEP encapsulated, Silicone, Viton®, Nitrile or Polypropylene felt available for non crush-fit end adapters.

Maximum Differential Pressure

Normal flow direction at:	
20°C (68°F):	4.2 bar (60.9psi)
80°C (176°F):	2.0 bar (29psi)
150°C (302°F):	0.5 bar (7.3psi)

Recommended ΔP:

2bar (14.5psi) up to 50°C (122°F)

Operating Temperature

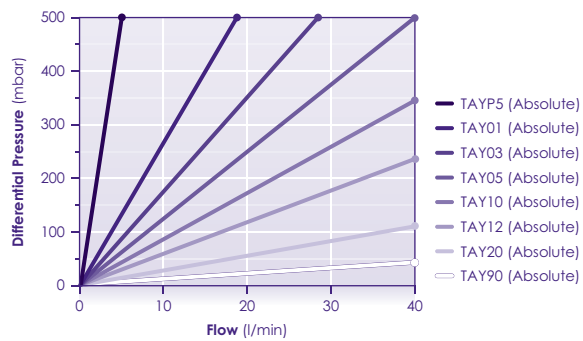
Maximum continuous: 150°C (302°F)

Extractables

Minimum total extractables.

Clean Water Flow Rates

- Typical clean water flow rate:
A 254mm (10") Tekfil™ single cartridge exhibits the flow-ΔP characteristics indicated below, for solutions with a viscosity of 1 centipoise.
- Other solutions:
For solutions with a viscosity of greater than 1 centipoise, multiply the indicated differential pressure by the viscosity in centipoise.



Additional Information

Range

Suitable for use in **Porvair** filter housings and as direct replacements for existing cartridges, Tekfil™ cartridges can be supplied with end fittings to suit most hardware installations without modification. They are available in lengths of 10, 20, 30 and 40 inches, and in a choice of removal ratings from 1 to 100 micron.

Material Conformity and Validation

European Food Contact Compliance

Tekfil™ TAY filter elements are of nylon construction and are fully thermally welded so don't use any adhesives or resins in the manufacturing process. The plastics used have been independently tested for levels of extractables, using test solutions of water and iso-octane and specific measured migrations were within regulatory limits making **Porvair** compliant with EC Directive 1935:2004 Food Compliance legislation, and incorporating 10/2011, and deemed safe for contact with aqueous based, alcohol based and dairy foods.

United States of America FDA Compliance

The materials used in the construction of our Tekfil™ TAY filter elements conform to the relevant requirements for food contact materials according to the American Code of Federal Regulations Part 21 CFR, part 177.

Registered to ISO 9001, **Porvair Filtration Group** procedures are subject to high standards of quality assurance as demonstrated through its Drug Master File status.

Chemical Compatibility

The Tekfil™ materials of construction are compatible with a wide range of chemicals and solvents, however care must be taken to select the appropriate seal material. Advice on chemical compatibility is available. Since operating conditions vary considerably between applications, verification by the end user is recommended.

Filter Housings

Please contact a **Porvair Filtration Group** representative for further information on our range of filter housings.

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