Filter Data Sheet

FNM grade Nylon Membrane Media Filter Cartridges developed for the special needs of the food and beverage industry

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FNM cartridges have been designed to comply with all FDA requirements for the food industry. Nylon is particularly suited for water and syrup filtration. Fermented beverages and high protein liquids are better filtered with other polymers. Contact Critical Process Filtration to discuss the potential to use this cartridge as a low cost alternative in compressed gas filtration. These cartridges have been rinsed with 17+ megohm-cm water to ensure that no manufacturing debris remains downstream to contaminate your product. This washing also ensures that extractables which may effect the taste of the product are removed.

Flow Rate

The following table represents typical water flow at a one psi (69 mbar) pressure differential across a single 10 inch cartridge element. The test fluid is water at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Pore Size	0.03 µm	0.1 µm	0.22 µm	0.45 µm	0.65 µm
GPM	0.75	1.0	1.25	3.0	5.5

Dimensions

Length: .....10 to 40 inches (25.4 to 101.6 cm.) nominal
Outside Diameter: .....2.75 inches (7.0 cm.) nominal

Maximum Differential Pressures

Forward: ..... 50 psi (3.4 bar) at 20°C.
Reverse: ..... 40 psi (2.7 bar) at 20°C.

Construction Materials [1]

Filtration Media: .....Nylon
Filtration Media Support: .....Polypropylene
End Caps: .....Polypropylene
Center Core: .....
Polypropylene
Outer support Cage: .....Polypropylene
O-rings: Buna, Viton, Silicone, EPR, Teflon® Encapsulated Silicone, Teflon® Encapsulated Viton

[1] All materials of construction are FDA accepted. Final assemblies have been validated to pass USP class 6 Toxicology extractable tests, oxidizable substances for plastics, endotoxin level and other quality tests.

Sterilization/Sanitization

Filtered hot water : .....90°C.
Autoclave: .....127°C 30 minute cycles
In-line Steam: .....135°C 30 minute exposure

Chemical Sanitization:..... Nylon doe not tolerate heavy concentrations of common sanitization agents. Consult Critical Process filtration to determine if your chemical sanitization protocol can be used with these cartridges. Or for a protocol that meets your needs and is compatible with these cartridges.

Integrity Test Specifications (per 10 inch length) (water wetted membrane)

Pore Size	Air Diffusion Rate
0.03 µm	< 30 cc/min. at 60 psi (4137 mbar)
0.1 µm	< 30 cc/min. at 48 psi (3307 mbar)
0.22 µm	< 30 cc/min. at 35 psi (2412 mbar)
0.45 µm	< 30 cc/min. at 20 psi (1378 mbar)
0.65 µm	< 30 cc/min. at 15 psi (1034 mbar)

Ordering Information

The cartridge catalog number is made up of several variable characters i.e. pore size, end cap code, length, and O-ring material. For example: a 0.10 µm , 20 inch (50.8 cm.) long cartridge with 2-222, Teflon® Encapsulated Viton O-rings, no spear (flat top) and no 316 SS Ring would be designated as: FNM*10N00002T5.

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Pore size code
***03** - 0.03 µm
***10** - 0.10 µm
***20** - 0.22 µm
***40** - 0.45 µm
***60** - 0.65 µm

316 SS Ring
S - Ring
N - No Ring

Cartridge Length
1 - 10 inches (25.4 cm)
2 - 20 inches (50.8 cm)
3 - 30 inches (76.2 cm)
4 - 40 inches (101.6 cm)

O-ring code
S - Silicone
B - Buna
V - Viton
T - Teflon® Encapsulated Viton
E - EPR
R - Teflon® Encapsulated Silicone

End cap code
0 - Flat Gasket, double open end
5 - 2-222 O-ring
7 - 020 O-ring
8 - 2-222 O-ring with Spear
9 - 2-226 O-ring with Spear