

# GNM Cartridge Filters

## Nylon 6,6 Membrane



General Service Grade Nylon 6,6 Membrane Filter Cartridges are designed for general purpose use wherever a pleated membrane filter is required. Designed to hold the maximum amount of filter media that can be completely and effectively utilized in a cartridge, GNM filters lower the cost of filtration. GNM cartridges are flushed with 17+ megohm-cm water to remove potential extraneous manufacturing debris. These cartridge modules are also individually tested for integrity.

### Construction Materials

|                           |   |
|---------------------------|---|
| <b>Filtration Media</b>   | Nylon 6,6 Membrane (absolute rated)   |
| <b>Media Support</b>      | Polypropylene   |
| <b>End Caps</b>           | Polypropylene   |
| <b>Center Core</b>        | Polypropylene   |
| <b>Outer Support Cage</b> | Polypropylene   |
| <b>Sealing Method</b>     | Thermal Bonding   |
| <b>O-rings</b>            | Buna, Viton® (or FKM), EP, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM) |

### Dimensions

|                         |  |
|-------------------------|--|
| <b>Length</b>           | 5 to 40 in. (12.7 to 101.6 cm) nominal                       |
| <b>Outside Diameter</b> | 2.75 in. (7.0 cm) nominal                                    |
| <b>Filtration Area</b>  | 7.0 ft <sup>2</sup> (0.65 m <sup>2</sup> ) per 10 in. length |

### Applications

- ◆ Process Water
- ◆ DI Water
- ◆ Chemicals
- ◆ Inks & Dyes
- ◆ Solvents

### Integrity Test Information

Representative samples from each lot are tested for integrity to ensure consistent performance.

### Maximum Operating Parameters

|                                       |  |
|---------------------------------------|--|
| <b>Differential Pressure</b>          |  |
| • Forward                             | 50 psid (3.4 bard) at 20 °C (68 °F)            |
| • Reverse                             | 40 psid (2.7 bard) at 20 °C (68 °F)            |
| <b>Operating Temperature</b>          | 82 °C (180 °F) at 10 psid (0.69 bard) in water |
| <b>Recommended Changeout Pressure</b> | 35 psid (2.4 bard)                             |

### Sanitization/Sterilization

|                           |  |
|---------------------------|--|
| <b>Filtered Hot Water</b> | 90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow |
| <b>Autoclave</b>          | 121 °C (250 °F), 30 min, multiple cycles                             |
| <b>In-line Steam</b>      | 135 °C (275 °F), 30 min, multiple cycles                             |

For all elevated temperature procedures above, a stainless steel support ring is required.

### Chemical Sanitization

Nylon does not tolerate aggressive chemical sanitization protocols. Nylon membrane cartridges are best sanitized with 1% hydrogen peroxide or 1% hydrogen peroxide and peracetic acid. Various manufacturers use different concentrations of active ingredients. Refer and adhere to the manufacturer's instructions for sanitizing nylon membrane.

### Total Performance

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.

## FDA and EC Compliance

All Critical Process Filtration filters are designed to meet the FDA requirements for processing food and beverage products. The materials used to construct GNM filters are listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440 and 177.2600 as appropriate. Membrane filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

## Extractables

GNM filters generally exhibit low levels of non-volatile residues.

## Flow Rate

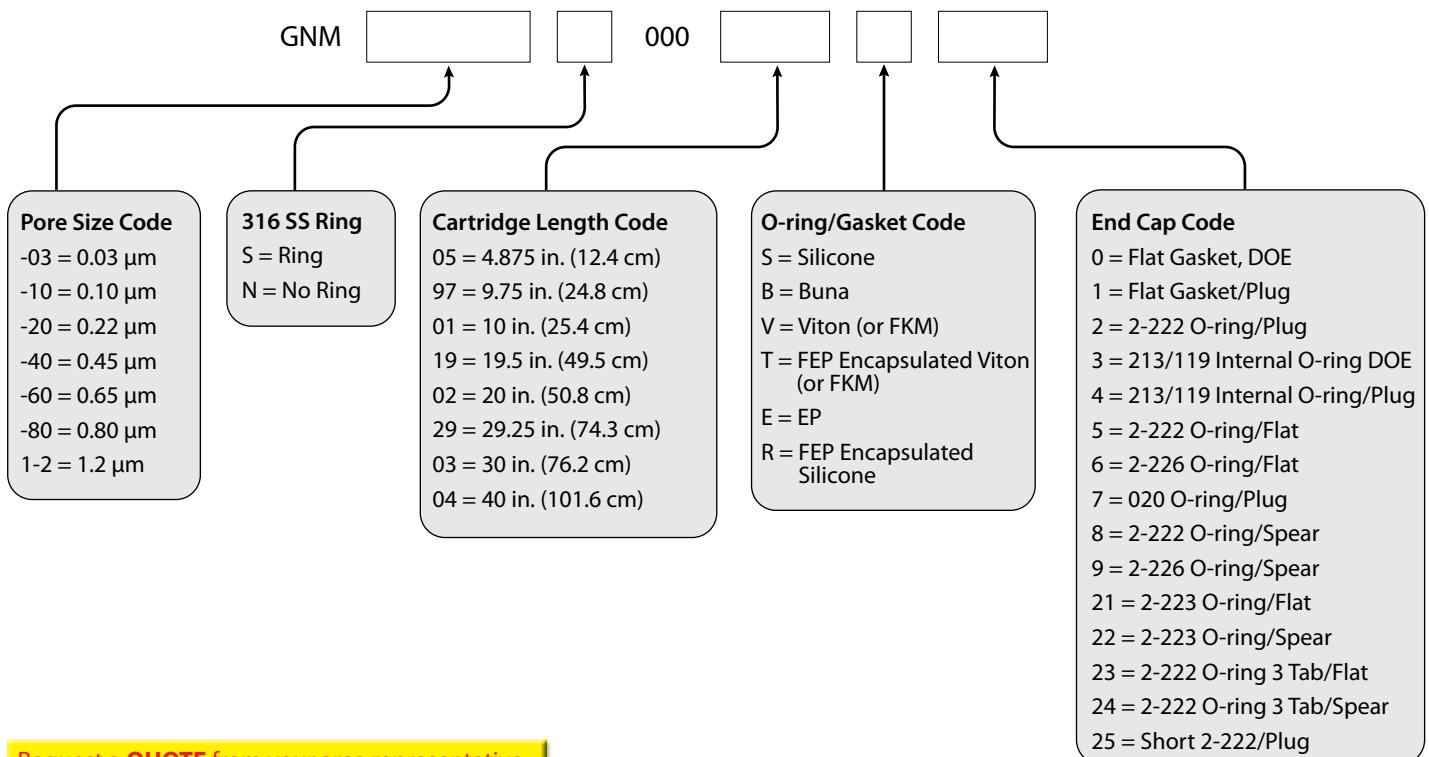
The Typical Flow Rates table represents typical water flow at a 1 psid (69 mbar) pressure differential across a single 10 in. cartridge element. The test fluid is water at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

### Typical Flow Rates

| Pore Size  | 0.03 µm | 0.10 µm | 0.22 µm | 0.45 µm | 0.65 µm | 0.8 µm | 1.2 µm |
|------------|---------|---------|---------|---------|---------|--------|--------|
| <b>GPM</b> | 0.6     | 1.0     | 1.8     | 3.0     | 4.2     | 5.0    | 5.5    |
| <b>LPM</b> | 2.27    | 3.79    | 6.81    | 11.36   | 15.90   | 18.93  | 20.82  |

## Ordering Information

Cartridge order numbers have several variables from pore size to end cap type. For example, General Service Grade Nylon 6,6 Membrane, 0.22 Micron Rating, No SS Support Ring, 20" Length, Silicone O-Rings, 2-222/Flat End Cap Configuration = GNM-20N00002S5.



Request a **QUOTE** from your area representative



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