

3M™ NB Series

Nylon Monofilament Filter Bags

3M™ NB Series – Nylon Monofilament (NMO) Filter Bags are produced using manufacturing processes that result in highly reliable filters with predictable and repeatable performance. The 3M NB Series – NMO filter bags are designed for applications where 25 to 1200 micron filtration at up to 180 gpm (#2 bag size) is required. The quality management system associated with the manufacturing of the 3M series NB filter bags is ISO 9001:2008 certified.

Features of the 3M NB Series – NMO filter bags include:

- **Consistent Pore Size:** The uniform openings of monofilament bags make them ideal in applications where it is desired that certain size particles in the incoming fluid pass through the filter (i.e. metallic paints...) while reliably removing larger undesirable particles.
- **High Strength Construction:** Since each thread is a single filament, monofilament bags have excellent strength controlling fiber migration and subsequent downstream fluid contamination.
- **High Temperature/Alkali Compatibility:** This makes the filters an appropriate choice for high temperature cleaning applications.
- **Availability in Coarser Grades:** The nature of monofilament materials allows for construction of bags with well defined larger pore openings for applications where it is desired to filter coarser particles.



Sealing

All 3M NB Series – NMO filter bags come standard with a galvanized metal ring for sealing into the bag housing. To avoid “lumping” of material around the ring and potential fluid bypass, special design considerations have been incorporated in the fastening of the media to the ring. This allows for proper sealing of 3M NB Series – NMO Filter Bags in conventional bag housings. For ease of removal from the filter bag vessel, a flexible handle is affixed to the filter. For identification and traceability, grade and lot information is included on a removable tag.

Materials/Construction

Each 3M NB Series – NMO filter bag grade is manufactured from industry proven and accepted monofilament fibers. No adhesives or binders are used in the media manufacturing process. 3M NB Series – NMO Filter Bags are compatible with a wide range of fluids and operating conditions.

Features & Benefits

Uniform Pore Sizing

- Allows desired undersized particles to pass through (metallic paints)
- Effective removal of oversized contaminants

Continuous Fiber Construction

- High fiber strength reducing the likelihood of bag rupture and downstream fluid contamination

High Temperature/Alkali Compatibility

- Appropriate choice for filtration of high temperature cleaning solutions

Available in Coarser Grades (>200µm)

- Cost effective filtration solution for those applications requiring removal of coarse particles only

Markets Served*

Industrial

Chemicals

Coatings

Hydrocarbon & Refining

Electronics

*3M NB Series – Nylon Monofilament Filter Bags are not constructed with FDA 21CFR listed materials and are not recommended for Food & Beverage applications.

Chemical Compatibility*

Chemical	Compatibility Rating
Strong Acids	Poor
Weak Acids	Fair
Strong Alkalis	Excellent
Weak Alkalis	Excellent
Solvents	Good

*Thermal and chemical resistance data presented in this brochure is for guidance only. Factors such as duration, degree of concentration of a substance in a fluid and temperature should also be considered.

Specifications & Operating Conditions*

Dimension	Nylon Monofilament Bag Filters	
	#1 Size	#2 Size
Nominal Removal Ratings (micron)	25, 50, 100, 150, 200, 250, 400, 600, 800, 1200	
Filter Diameter	7 in. (17.8cm)	
Filter Length (in/cm)	17.5 in./44.5cm	32 in. (81.3cm)
Maximum Recommended Flow Rate (gpm/lpm)*	90 gpm (340 lpm)	180 gpm (681 lpm)
Maximum Operating Temperature	300°F/149°C	
Maximum Forward Differential Pressure	35 psid @ 68°F (2.4 bar @ 20°C)	
Recommended Change-out Differential Pressure	20 psid (1.4 bar)	

*For aqueous solutions (1 cps) based on maintaining clean pressure drop (media only) of <2 psid (0.14 bar).

3M™ NB Series – Nylon Monofilament Filter Bag Ordering Guide

Filter Designation	Nominal Removal Rating	Material (Media/Plastic Components)	Bag Size	Collar Type
NB – Nominal Bag	0025 – 25µm 0050 – 50µm 0100 – 100µm 0150 – 150µm 0200 – 200µm 0250 – 250µm 0400 – 400µm 0600 – 600µm 0800 – 800µm 1200 – 1200µm	NYS – Nylon Monofilament	1 – Size #1 2 – Size #2	R – Metal Ring

PLEASE NOTE: The Ordering Guide above is for reference only. Not all combinations are available. Please consult with your 3M Representative to determine the appropriate part number for your application.

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Your local distributor:

3M Purification Inc.
 3M Separation and Purification Sciences Division
 400 Research Parkway
 Meriden, CT 06450 USA

Phone 1-800-243-6894
 1-203-237-5541
 Fax 1-203-630-4530
 Web 3Mpurification.com

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