

3M™ 500 Series

High Performance Liquid Filter Bags



3M™ 500 series high performance liquid filter bag incorporates the bypass and transport layer design that maximizes the amount of surface area in each bag. The result is a filter designed to improve performance and reduce operating costs. The filter contains up to 38 square feet of usable filter media. Compare this with only 4.4 square feet for most competitive filter bags and 0.65 square feet for most competitive cartridges.

To make use of this entire surface area, 3M 500 series liquid filter bag is constructed using the Bypass/Transport concept, specially designed bypass holes are cut into certain areas of the filter media to prevent premature blinding of the filter. In conjunction with the bypass design, a second media called a transport layer helps to distribute fluid flow evenly through the filter. The outer layers of the filter provide a highly uniform barrier for final particle filtration. This construction results in very high dirt loading capacity, even at high flow rates. There are no sewn seams used in any of the filtering layers, thus allowing high filtration efficiencies for fine particles.

The Bypass/Transport filter technology is manufactured in a filter bag form to provide additional operational advantages:

- Changeout time – easier and faster, less labor required
- Bag compressibility – easier and less costly disposal
- Contaminant captured inside the bag – easier handling

Materials of Construction

Filter Media:

Melt blown polypropylene microfiber filter media provides high particle removal efficiency for high quality filtration with broad chemical compatibility.

No silicone is intentionally used in materials of construction or in manufacturing.

The raw materials composing these filters are FDA compliant according to CFR Title 21.

Ring and Bottom Clamp:

| | |
|---------------------|------------------------|
| • Acids and bases | • Groundwater clean-up |
| • Amines | • Machine coolants |
| • Carbon beds | • Makeup water |
| • Completion fluids | • Organic solvents |
| • Deep wells | • Photo chemicals |
| • Desalination | • Plating solutions |
| • DI resins | • RO membranes |
| • Glycol | • Storm Water |

Applications

Prefilters or Final Filters for:

Performance Data

Loading Capacity

| Product Model Number | 522 | 525 | 527 | 529 |
|---------------------------------------|------|------|------|------|
| Dirt - grams at 25 gpm (5.6 cu m/hr) | 308 | 489 | 755 | 980 |
| Dirt - grams at 50 gpm (11.2 cu m/hr) | 215 | 430 | 645 | 925 |
| Mineral Oil - grams at saturation | 4725 | 5025 | 6675 | 3595 |

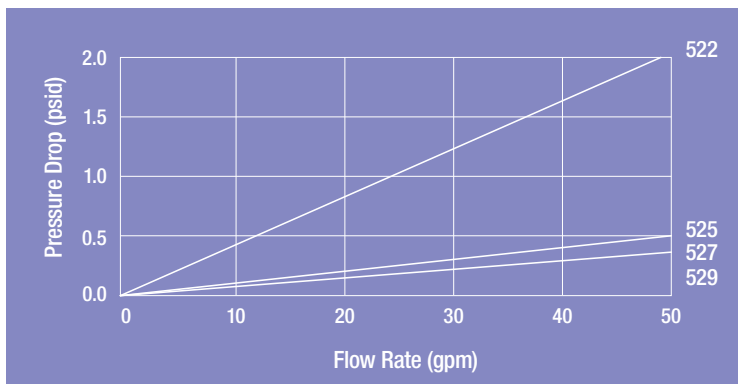
Loading: The data above shows typical loading capacities of the different micron rated filters. Loading capacity is determined by challenging a filter with a dispersion of silica test dust in water at the recommended flow rate. Pressure drop is monitored and testing is terminated at 35 psid (2.4 bar). The loading capacity reported is the dry weight gain of the bag.

Particle Removal Efficiency (microns)

| Model Number | 522 | 525 | 527 | 529 |
|-----------------|------|------|-----|-----|
| Efficiency @99% | 2.5 | 5.0 | 15 | 48 |
| Efficiency @95% | 1.5 | 3.0 | 9 | 35 |
| Efficiency @90% | 0.9 | 1.5 | 8 | 30 |
| Efficiency @75% | <0.7 | 1.0 | 7 | 22 |
| Efficiency @50% | <0.7 | <1.0 | 4 | 8 |

Efficiency: The Series 500 High Performance Filter Bags are rated using a silica test challenge in water at 25 gpm (5.7 cu m/hr). The results reported are typical initial efficiencies taken within ten minutes of the start of the test and are cumulative data.

Clean Pressure Drop Versus Flow Rate (psid)



Pressure Drop: The 3M™ 500 series high performance filter bags have low initial pressure drop (Δp) in water as the chart indicates. The chart includes the pressure drop of a typical single vessel to assist you in sizing your filter system.

Operating Conditions

| | |
|------------------------------------|----------------------|
| Maximum Operating Temperature: | 180° F (82° C) |
| Recommended Flow (in water): | 25 gpm (5.7 cu m/hr) |
| Suggested Maximum Flow (in water): | 50 gpm (11 cu m/hr) |

Product Specifications

| Model Number | Micron Rating Initial Efficiency | Part Number | Length | Outer Diameter | Cartridges per Case |
|--------------|----------------------------------|----------------|---------------------------|----------------|---------------------|
| 522 | 1.5 micron @ 95% | 70-0708-1218-8 | #2 size: 32 in (81 cm) | 7 in (18 cm) | 4 |
| 525 | 2.5 micron @ 95% | 70-0702-3335-1 | | | |
| 527 | 7.5 micron @ 95% | 70-0702-3168-6 | | | |
| 529 | 10 micron @ 95% | 70-0702-3338-5 | | | |

Important Notice

3M Purification Inc. MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Since a variety of factors can affect the use and performance of a 3M Purification Inc. product in a particular application, some of which are uniquely within the user's knowledge and control, user is responsible for determining whether or not the 3M Purification Inc. product is fit for a particular purpose and suitable for user's method of application.

Limitation of Remedies and Liability

If the 3M Purification Inc. product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M Purification Inc.'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OR TO REPAIR OR REPLACE THE DEFECTIVE PRODUCT. 3M Purification Inc. shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty or strict liability.

Warranty

Seller warrants its equipment against defects in workmanship and material for a period of 12 months from date of shipment from the factory under normal use and service and otherwise when such equipment is used in accordance with instructions furnished by Seller and for purposes disclosed in writing at the time of purchase, if any. Any unauthorized alteration or modification of the equipment by Buyer will void this warranty. Seller's liability under this warranty shall be limited to the replacement or repair, F.O.B., point of manufacture, of any defective equipment or part which, having been returned to the factory, transportation charges prepaid, has been inspected and determined by Seller to be defective. THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR USE, OR ANY OTHER MATTER. Under no circumstances shall Seller be liable to Buyer or any third party for any loss of profits or other direct or indirect costs, expenses, losses or consequential damages arising out of or as a result of any defects in or failure of its products or any part or parts thereof or arising out of or as a result of parts or components incorporated in Seller's equipment but not supplied by the Seller.



3M Purification Inc.

400 Research Parkway
Meriden, CT 06450
U.S.A.

Phone (800) 243-6894

(203) 237-5541

Fax (203) 630-4530

www.3Mpurification.com

Your Local Distributor:

Please recycle. Printed in U.S.A.
3M is a trademark of 3M Company.
© 3M 2011. All rights reserved.
70-0708-1288-1 REV 1111b