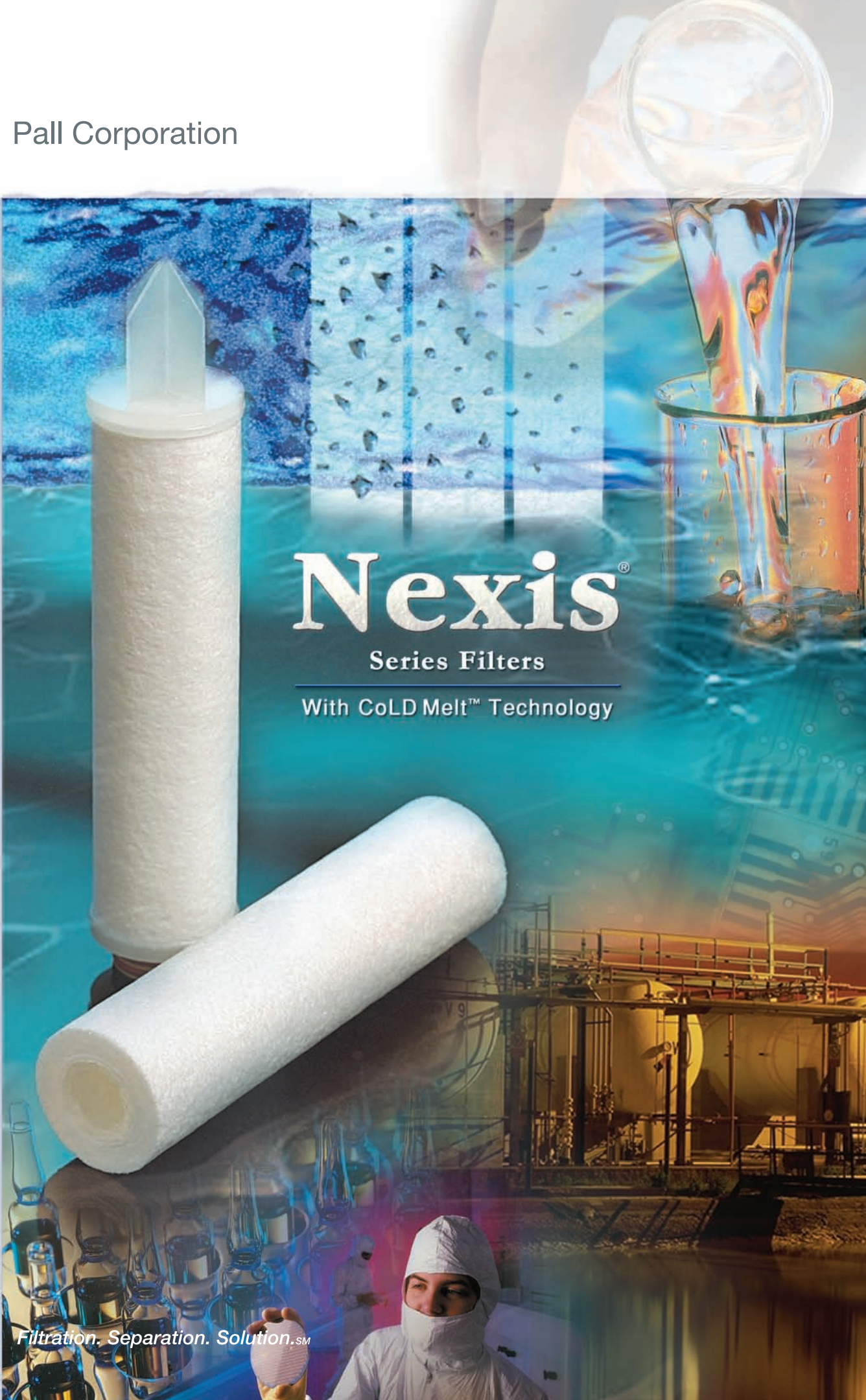




Pall Corporation



# Nexis<sup>®</sup>

Series Filters

With CoLD Melt<sup>™</sup> Technology

Filtration. Separation. Solution.<sup>SM</sup>

## Advanced Melt Blowing Technology

Pall has developed a revolutionary melt blown technology called CoLD Melt™ technology. This technology consists of an innovative web structure, comprised of micro-thin fibers, intermingled with large diameter support fibers. Pall's proprietary, CoLD (Co-located Large Diameter) Melt fiber structure provides distinct filter benefits – highly efficient contaminant removal, long service life, and improved strength. This design overcomes some of the intrinsic shortcomings of other types of depth filters and provides exceptional filtration performance.

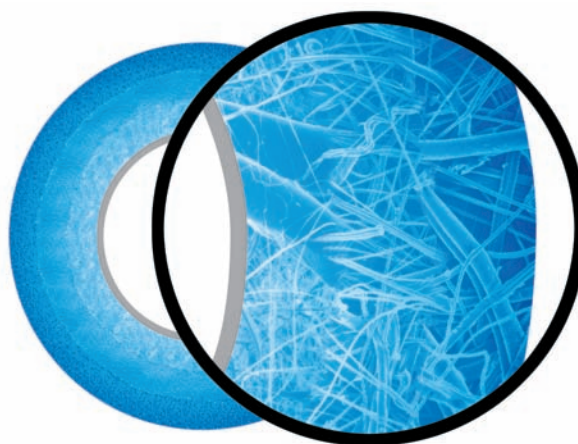
### Nexis® Series Filters

Nexis® series high-efficiency depth filters are manufactured using an advanced, microprocessor-controlled, CoLD Melt production process. This sophisticated process allows the creation of multiple filtration zones within a single filter cartridge. The multi-zone design produces a gradient pore structure, which effectively captures larger particles in the outer sections of the filter, while providing highly-efficient and consistent removal of smaller particles in the inner sections.

Pall's CoLD Melt fiber technology has been integrated into critical zones on each Nexis filter to enhance the filter's retention, efficiency, and mechanical strength. The interlocking, thermal bonding of support fibers with ultra-thin filtration fibers creates a rigid filter matrix that withstands dynamic operating conditions. The array of micro-thin melt blown fibers in the filter creates a high degree of internal void volume, enabling the filter to capture and retain more contaminant than other types of depth filters. As a result, Nexis filters offer lower operating costs through longer service life cycles and less frequent cartridge change-outs.



Nexis series filters.



CoLD Melt fibers enhance the strength of the fiber matrix in the most critical filtration zones.

## Performance Advantages

- *Varied center core design*

Nexis products are known for their superior strength. At the heart of each filter, there is either a conventional molded polypropylene core or a heavy wall polypropylene extruded fibrous core. The specific core type used with each micron grade is designed to maximize the mechanical strength, flow, and economics of the particular grade product that is selected.

- *Purity of construction*

Nexis filters are manufactured with polypropylene filter media, which does not employ adhesives or silicones. Nexis filters are used in a wide array of applications due to their chemically resistant materials of construction.

- *Consistent efficiency*

The support fibers used in the CoLD Melt fiber design hold the finer filtration fibers firmly in place under variable flow and pressure conditions. This rigid pore structure results in consistent, reliable, and reproducible filtration.

- *Improved filtration of viscous fluids*

Excessive filter media compression, especially in filters that use only very fine melt blown fibers, can limit the service life and efficiency of a filter. The enhanced mechanical strength and integral fluid transport system provided by the CoLD Melt fiber structure resists compression and provides significant improvements in filtration performance.

- *Longer life cycles*

Nexis filters with CoLD Melt fiber technology do not collapse or compress in response to increasing differential pressure, as is the case with some conventional filters. The result is very efficient filtration of contaminants over extended life cycles. When compared to conventional depth filters of equal efficiency ratings, Nexis filters can provide significantly longer life cycles

### Application Success

paint, coatings & solvents

up to 6 times on stream  
life improvements

filtration costs  
significantly reduced

## Wide Range of Chemical Compatibilities

*The data presented is for general guidance only. Contact your Pall representative for more specific data. Trial compatibility tests are recommended to optimize results.*

Classification	Excellent	Good	Suggest Testing	Not Recommended
Organic acids	Excellent			
Inorganic acids		Good		
Solvents			Suggest Testing	
Alkalies	Excellent			
Oils		Good		
Water (ambient)	Excellent			
Oxidants			Suggest Testing	
Brine solution	Excellent			
Steam sterilization				Not Recommended



*Nexis T filters are ideal for filtration of automotive coatings, which typically have narrow particle size distributions.*

# Innovative Design

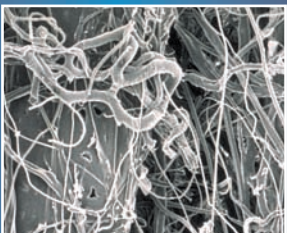
## Micrographs of Nexis Filter's Graded Pore Structure (Magnification 75x)



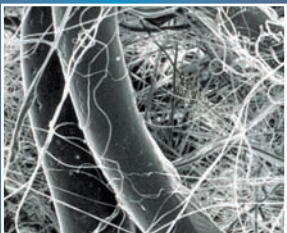
Outer filtration zones



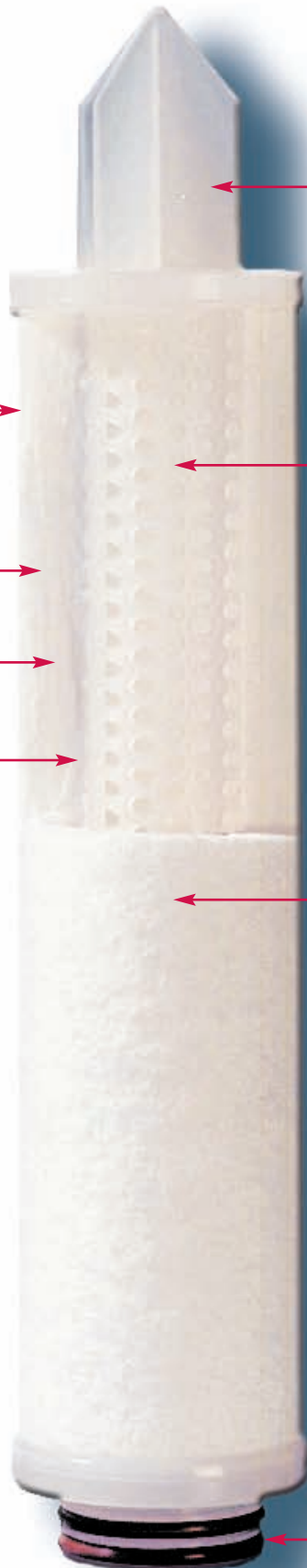
Intermediate filtration zones



Intermediate filtration zones with CoLD Melt fibers



Final filtration zone: Micro-thin fibers interwoven with CoLD Melt fibers



### Optional end caps

- Thermally sealed to the filter cartridge
- No adhesives or foreign material added

### Core construction

- Varied center core design to maximize the strength of each product grade
- Allows optimization of media for filtration
- Designed for rigorous applications

### Unique polypropylene melt blown media

- Incorporates a proprietary CoLD Melt fiber technology for longer service life and improved strength
- Highly efficient contaminant removal
- Media does not employ adhesives or silicones

### Optional O-rings or elastomer gasket seals

- Improved cartridge-to-housing seal
- Prevents fluid bypass

### Application Success

aqueous parts washers

service life increased 33%

no cartridge delamination  
substantial cost savings

## High-performance, Consistent Filtration

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Product Feature	Product Benefit	Customer Benefit
Polypropylene filter media	<ul style="list-style-type: none"> <li>• Broad chemical resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced inventory costs by using elements in multiple applications within a given facility</li> </ul>
Proprietary CoLD Melt fiber technology	<ul style="list-style-type: none"> <li>• Consistent filtration as differential pressure increases</li> <li>• Cartridge will not randomly unload contaminants</li> <li>• Improved flow performance in viscous fluids</li> </ul>	<ul style="list-style-type: none"> <li>• High-performance filtration in critical applications</li> <li>• Consistent and reproducible filtration results</li> <li>• Less rework due to inconsistent filtration</li> </ul>
Continuously gradient pore structure	<ul style="list-style-type: none"> <li>• Outer layers provide cost-effective prefiltration, while inner sections provide highly efficient final filtration</li> </ul>	<ul style="list-style-type: none"> <li>• Longer service life</li> <li>• Lower annual filtration costs</li> <li>• Minimizes annual disposal costs</li> </ul>
Core construction unique to the micron grade	<ul style="list-style-type: none"> <li>• High-collapse strength</li> <li>• Solid temperature resistance</li> <li>• Optimized flow distribution</li> </ul>	<ul style="list-style-type: none"> <li>• Versatile filter can be used in rigorous applications</li> <li>• Uniform filtration results</li> </ul>
Melt blown micro-fiber filtration	<ul style="list-style-type: none"> <li>• High-efficiency particle removal</li> <li>• Greater void volumes than conventional depth filters</li> <li>• Non-fiber releasing</li> </ul>	<ul style="list-style-type: none"> <li>• Enhanced filtration results</li> <li>• Elimination or reduction of recirculation to achieve desired filtration results</li> <li>• Clean filtrate</li> </ul>
Highly-automated computer controlled manufacturing process	<ul style="list-style-type: none"> <li>• Minimal lot-to-lot variability</li> <li>• Custom engineered formulations are achievable</li> <li>• Lot traceability</li> </ul>	<ul style="list-style-type: none"> <li>• Improved product quality</li> <li>• Higher production yields</li> <li>• Lower filtration costs</li> </ul>
Weld-free continuous-length filters up to 101.6 cm (40 in)	<ul style="list-style-type: none"> <li>• Minimizes the chance of particle bypass</li> <li>• Uniform fluid distribution</li> <li>• Full utilization of filter media area</li> </ul>	<ul style="list-style-type: none"> <li>• Enhanced product quality</li> <li>• Improved production yields</li> </ul>

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## Industrial Applications

Advanced designs, innovative features, and stringent quality controls make Nexis filters ideal for most critical processing applications.

Nexis Series Filters <sup>1</sup>	Retention Ratings (µm)	Efficiency	Feature	Type of Application	Examples
Nexis A	0.5-120	>99.9%	CoLD Melt fiber technology with gradient pore structure	Fluids with broad particle size distribution; deformable contaminant removal	Bulk chemicals, general fine chemicals, production of brake fluid, amines, glycol, salt solutions, some inorganic acids, softener production, inkjet additives, machine coolants, make-up water, acids, pre-RO
Nexis T	0.5-200	90%			

### Nexis A series filters

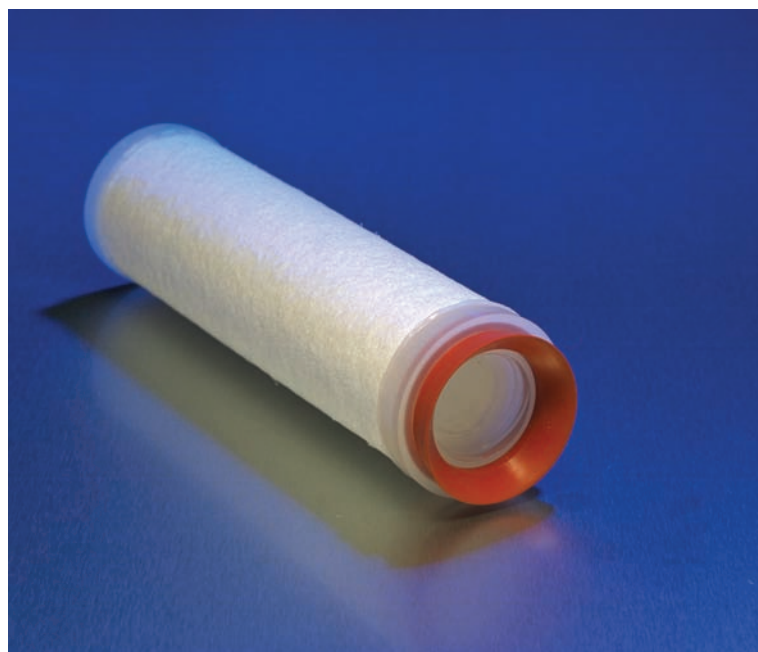
Nexis A series filters are rated at >99.9% efficiency<sup>2</sup>. Nexis A filters are available in a variety of retention ratings to meet specific application needs – from 0.5 to 120 microns. These filters are an excellent choice for critical applications requiring precise contaminant removal. All Nexis A filters include a certificate of conformance with specific lot identification.

### Nexis T series filters

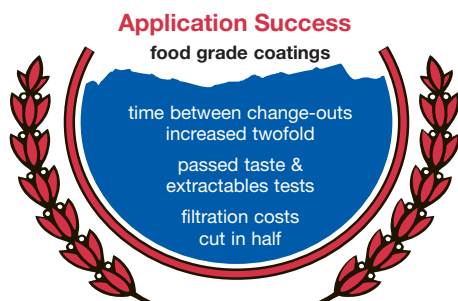
Nexis T series filters feature the same CoLD Melt fiber technology and benefits as Nexis A series filters, with a 90% efficiency rating. Retention ratings range from 0.5 to 200 microns. Nexis T filters are an ideal choice for processes needing high-performance filtration at an economical price.

### Reusable core option

Nexis A and Nexis T filters are available with reusable cores (called Micropak™ filters). The reusable core format uses the same advanced melt blown media and offers the same performance as standard Nexis A and Nexis T filters. Additionally, the reusable cores provide greater temperature and environmental benefits. For more information on the Micropak product line contact your local Pall representative.

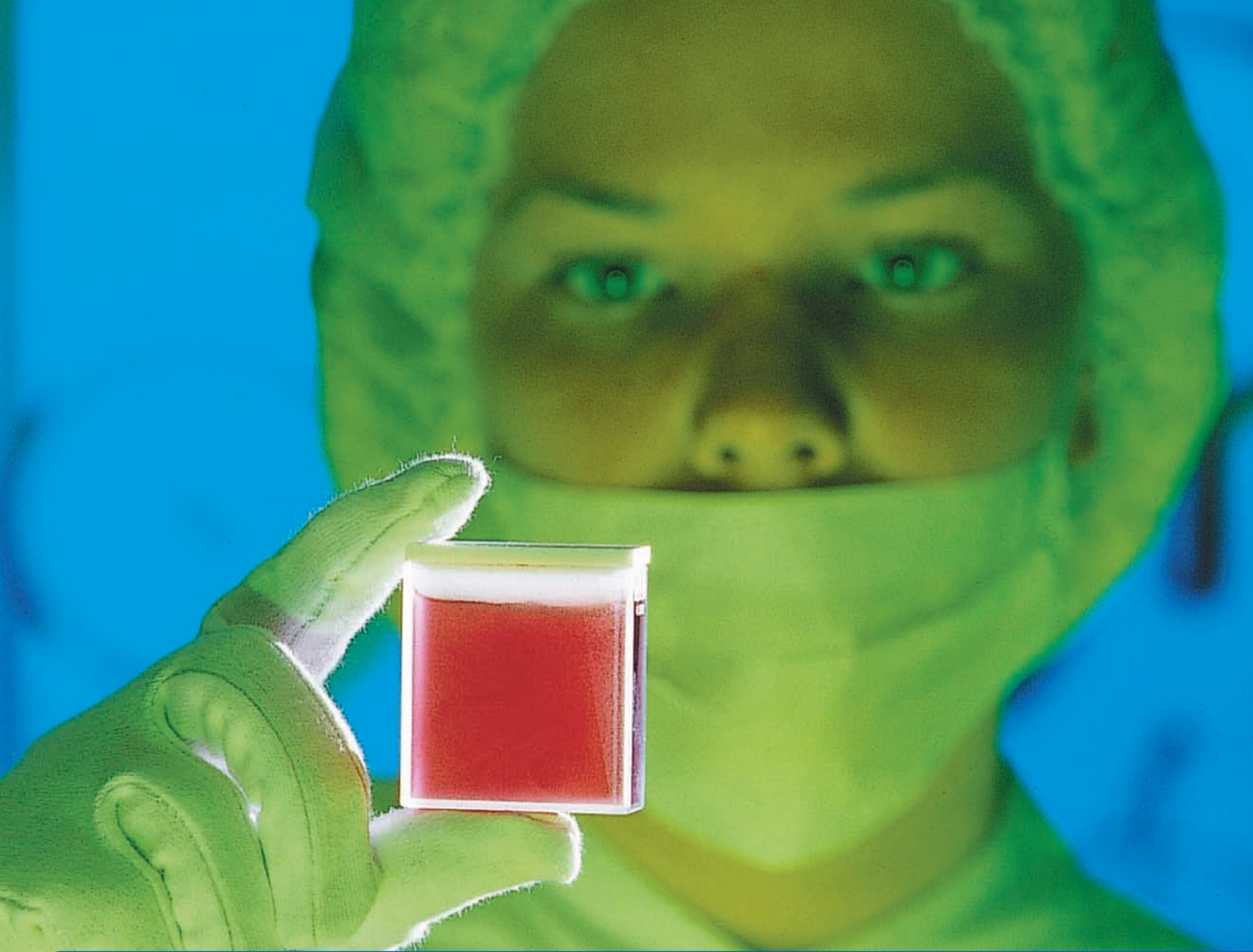


*Micropak reusable core filter with Nexis A media.*



<sup>1</sup> **Food and Water Contact Use** - Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.

<sup>2</sup> >99.9% retention rating by ASTM F-795 test.





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Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.

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