PALL Food and Beverage

Imperium™
Microbial Stabilization Filter

Protecting Taste and Quality with a Fresh Approach to Microfiltration

For the Final Filtration of Beer

The Imperium Platform is the next generation of microfiltration technology, for Food & Beverage producers who truly value the importance of product quality, process optimization and continuous improvement.

As the final control step prior to packaging, the Imperium Microbial Stabilization (MSB) Filter removes spoilage organisms which can adversely affect taste and quality, providing a fresh beer with excellent shelf-life.

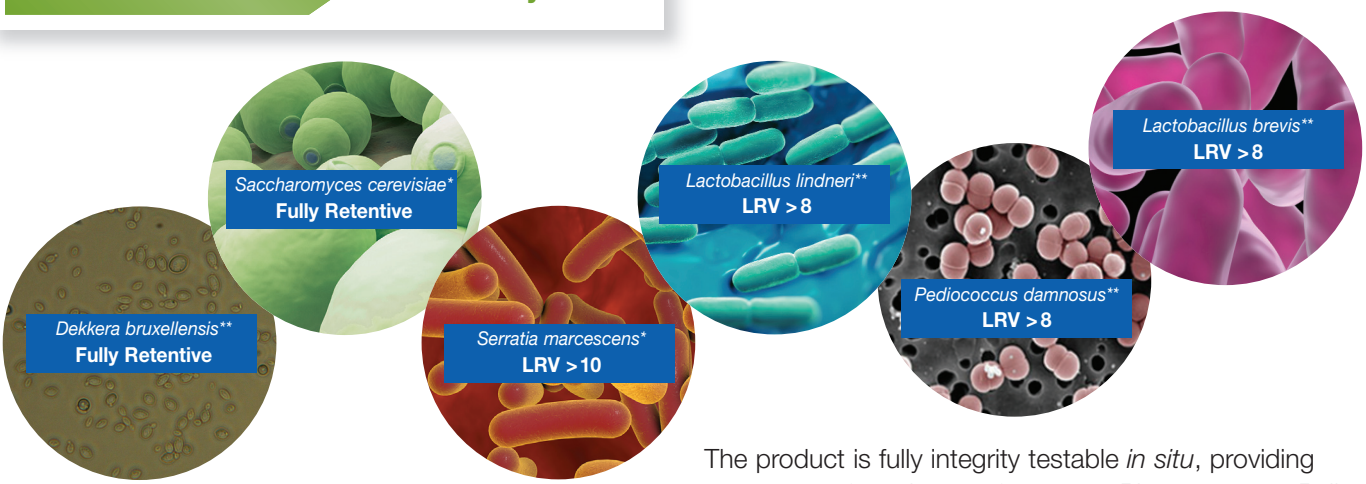
Patent pending design with 10 m^2 newly developed Supor® Polyethersulfone (PES) membrane and an 88% reduction in material junction points, together with the Imperium integrity test approach and modular housing configuration, result in up to 30% reduction in operating costs, reduced risk of product contamination and complete process flexibility.

10 m^2 filtration area with new Supor® PES membrane	**Up to 30% Reduction in Operating Costs**
Imperium integrity test approach and 88% reduction in material junction points	**Reduced Risk of Product Contamination**
Modular housing configuration	**Complete Process Flexibility**

Identify | **Control** | Monitor | Act

Microbial Retention

Laboratory challenge testing has been performed on new and unused filters to *qualify** or determine *typical*** retention to various microorganisms.



The product is fully integrity testable *in situ*, providing assurance of product performance. Please contact Pall Food & Beverage for integrity test parameters.

Filter Sizing – OPEX Optimization

Depending on the quality of pre-filtration and beer filterability, Pall SLS Global Technical Support will recommend optimal sizing specific to your process.

The maximum recommended beer flow rate per housing is 28 hL / hour (12 US Gal / min), with parallel multi-size configurations available for increased flow rates up to 226 hL / hour (99 US Gal / min).

Differential Pressure	Clean Water Flow Rate
100 mbarg	190 L / min (50 US Gal / min)

Based on laboratory testing with water at 20 °C, 1 centipoise viscosity.

Quality

- Cartridges produced in a controlled environment
- Manufactured under a Quality Management System certified to ISO9001:2008

Sanitization, Sterilization and Regeneration[1]

Fluid	Exposure
Steam (max ΔP 300 mbarg forward or reverse)	13 hours 135 °C
Hot Water	112 hours 90 °C
NaOH	185 hours 3% 85 °C
Peracetic Acid	2,000 hours 325 ppm ambient
Nitric Acid Phosphoric Acid	240 hours 1% ambient

[1] Maximum cumulative exposure measured under laboratory test conditions. The actual cumulative time depends on the process conditions. Cartridges should be cooled to system operating temperature prior to use. Contact PALL for recommended procedures.

Materials of Construction

Filter Membrane	Supor Polyethersulfone
Support and Drainage	Polypropylene (Talc / TiO_2 / SiO_2 filled)
Core, Cage, End-cap, Handle	Polypropylene (Talc / TiO_2 / SiO_2 filled)
Adaptor	Polypropylene (Talc / TiO_2 / SiO_2 filled) with fully encapsulated Stainless Steel Ring (SS316L)
O-rings	Silicone

Ordering Information

Part Number: IMP C MSB D W H4

IMP:	Imperium Platform
C:	Cartridge
MSB:	Microbial Stabilization
D:	Membrane Grade
W:	Food Contact Compliant
H4:	Silicone O-ring

* EPR O-Rings available in separate pack

Operating Characteristics in Compatible Fluids[2]

Maximum Differential Pressure	Operating Temperature
6 bar (87 PSI) (forward)	40 °C (104 °F)
1 bar (14.5 PSI) (reverse)	40 °C (104 °F)
2.5 bar (36.3 PSI) (forward pulses x 10,000)	Ambient

[2] Compatible fluids are defined as those which do not swell, soften or adversely affect any of the filter components

Food Contact Compliance

Please refer to the Pall website www.pall.com/foodandbev for a Declaration of Compliance to specific national legislation and / or regional regulatory requirements for food contact use.

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Filtration. Separation. Solution.SM

Visit us on the Web at www.pall.com/foodandbev

Pall Corporation has offices and plants throughout the world. For Pall representatives in your area, please go to www.pall.com/contact

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.

Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit www.pall.com to verify that this information remains valid.

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