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.

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.

### Sanitization, Sterilization and Regeneration

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steam (max ΔP 300 mbarg forward or reverse)</td>
<td>13 hours 135 ºC</td>
</tr>
<tr>
<td>Hot Water</td>
<td>112 hours 90 ºC</td>
</tr>
<tr>
<td>NaOH</td>
<td>185 hours 3% 85 ºC</td>
</tr>
<tr>
<td>Peracetic Acid</td>
<td>2,000 hours 325 ppm ambient</td>
</tr>
<tr>
<td>Nitric Acid</td>
<td>240 hours 1% ambient</td>
</tr>
<tr>
<td>Phosphoric Acid</td>
<td></td>
</tr>
</tbody>
</table>

1Maximum 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 / TiO₂ / SiO₂ filled)
- **Core, Cage, End-cap, Handle**: Polypropylene (Talc / TiO₂ / SiO₂ filled) with fully encapsulated Stainless Steel Ring (SS316L)
- **Adaptor**: Polypropylene (Talc / TiO₂ / SiO₂ filled)
- **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

<table>
<thead>
<tr>
<th>Maximum Differential Pressure</th>
<th>Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 bar (87 PSI) (forward)</td>
<td>40 ºC (104 ºF)</td>
</tr>
<tr>
<td>1 bar (14.5 PSI) (reverse)</td>
<td>40 ºC (104 ºF)</td>
</tr>
<tr>
<td>2.5 bar (36.3 PSI) (forward pulses x 10,000)</td>
<td>Ambient</td>
</tr>
</tbody>
</table>

2Compatible 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.

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.

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