Filter Cartridges – 0.2 µm
The New Sterilizing Grade Filters with TwinPleat Technology

Sartopore®
A New Vision of Perfection.
A New Class of Sterile Filtration.
Sartopore® Platinum defines the new benchmark for sterilizing-grade filtration. These cartridges contain a unique heterogeneous double layer of hydrophilized polyethersulfone membranes and are specially designed to meet the requirements for filtration of a broad range of pharmaceutical products.

The complete new and innovative technologies which are incorporated in these filters lead to outstanding and unique performance data. Using Sartopore® Platinum the critical step of sterilizing-grade filtration will reach a yet unmatched quality, performance and cost efficiency:

- outstanding total throughput and permeability
- unmet wettability
- broad chemical compatibility (pH 1-14)
- high thermal resistance
- exhibiting very low protein binding
- low extractables level
- reliable integrity testing

**New Surface Modification**
A new and patented membrane hydrophilization process is used to permanently modify the membrane surface. In this process, a thermally exceptionally stable and hydrophilic polymer is directly grafted to the inner and outer surface of the membrane.

This new technology provides those membrane surface properties that are responsible for the outstanding wettability and low protein binding character of the Sartopore® Platinum membrane, even after extreme thermal and chemical stress, allowing e.g. multiple cycles of wet and dry steaming in both directions without affecting wettability and integrity testing.

**New Membrane Construction – TwinPleat**
The new and innovative TwinPleat Technology (patent pending) is characterized by an alternating sequence of longer and shorter membrane pleats, positioned in a specific angle. This special design maximizes the effective filtration area (e.g. +66% compared to Sartopore® 2) without compromising the hydrodynamics during filtration. Thus, the cartridges are characterized by an outstanding total throughput by which the filtration process will be most efficient.

**Applications**
Due to the broad chemical compatibility and excellent filtration performance Sartopore® Platinum cartridges are suitable for most filtration applications in pharmaceutical and biotechnological processes.

**Excellent Wettability**
Sartopore® Platinum cartridges can be easily wetted. For example, less than 5 L water are required for wetting and consistent integrity testing of a 10” cartridge. This excellent wetting behavior will thus directly reduce the filtration costs of your process.

**Reliable Integrity Testing**
Imperfect wetting is the most frequent reason for failed integrity tests. In such cases filters have to be reliably re-wetted and tested again. Besides the cost factor for the additional test also a certain risk is present to loose a complete product batch when even repeated tests fail again.

The extraordinary wetting behavior of Sartopore® Platinum thus helps to eliminate this important risk factor. Using Sartopore® Platinum the process of integrity testing meets a yet unmet degree of reliability.

**Scalability**
Due to an identical total throughput performance per squaremeter membrane area of the different filter sizes, and due to full product accessibility to the entire membrane even in the depth of the pleats, Sartopore® Platinum filters are perfectly scalable from R&D to production scale.

**Microbial Retention**
Sartopore® Platinum cartridges are fully validated as sterilizing grade filter elements according to HIMA and ASTM F-838-05 guidelines.

**Packaging**
All cartridges are double wrapped for easy and safe clean-room transfer.

**Quality Control**
Each individual element is integrity tested by diffusion and bubble point prior to release, assuring highest quality and absolute reliability.

**Documentation**
Sartopore® Platinum filter cartridges are designed, developed and manufactured in accordance with an ISO 9001 certified Quality Management System. A Validation Guide and Extractables Guide are available for compliance with regulatory requirements.
Specifications

Materials of Construction
- Prefilter membrane: Polyethersulfone, asymmetric
- Endfilter membrane: Polyethersulfone, asymmetric
- Support fleece: Polypropylene
- Core: Polypropylene
- End Caps: Polypropylene
- O-rings: Silicone (optional EPDM or Viton)

Pore Size
0.45 µm + 0.2 µm (double layer)

Available Sizes | Filtration Area
--- | ---
Size 1: 10" | 1.0 m² | 10.8 ft²
Size 2: 20" | 2.0 m² | 21.5 ft²
Size 3: 30" | 3.0 m² | 32.3 ft²

Available Adapters
25 (226-o-ring)

Operating Parameters
- Max. allowable differential pressure: 5 bar | 72.5 psi at 20°C
- Max. allowable back pressure: 2 bar | 29 psi at 20°C

Extractables
Sartopore® Platinum 0.2 µm rated filter cartridges meet, or exceed the requirements for WFI quality standards set by the current USP. A detailed Extractables Guide is available on request.

Regulatory Compliance
- 100% individually integrity tested (Diffusion Test and Bubble Point Test).
- Integrity test correlated with HIMA | ASTM F838-05 Bacterial Challenge Test.
- Non pyrogenic according to USP Bacterial Endotoxins.
- Passes USP Plastics Class VI Test.
- Non-fibre releasing according to 21 CFR.

Sterilization
- In-Line Steam Sterilization
  134°C, 20 min. at max. differential pressure of 0.5 bar | 7.25 psi in forward and reverse direction
- Autoclaving
  134°C, 2 bar | 29 psi, 30 min

Sterilization Cycles
- In-Line Steam Sterilization: min. 25
- Autoclaving: min. 25

Technical References
- Validation Guide
  SPK5795-e

Unspecific Protein Binding

Water Flow Rates 10", 20", 30"

Standardized at 20°C

Unspecific Protein Binding (Gamma Globuline) [g/10" Cartridge]

- Sartopore® Platinum
- Sartopore® 2
- Competitor A (PES)
- Competitor B (PES)
- Competitor B (PES/PVDF)

- 0.1
- 0.12
- 0.32
- 0.86
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