

## Ultipor® GF Plus Filters — AB Cartridge Style

### Description

Pall Ultipor GF Plus® filter cartridges are made with positive Zeta modified glass fiber media for enhanced efficiency. The single open ended (SOE) AB style cartridges feature a high area pleated element construction designed to fit in sanitary style filter housings. A bio-safe low extractables binder resin covalently immobilizes the glass fibers and imparts a strong positive charge in aqueous service. In addition to the high particulate removal efficiency and low pressure drops consistent with glass fiber media, the added positive Zeta charge enables Ultipor GF Plus filters to effectively remove submicron haze particles or endotoxins from a wide variety of aqueous biological, pharmaceutical, cosmetic and toiletry solutions.



- Positive Zeta enhances efficiency
- High area pleated medium
- High voids volume
- Low differential pressure
- High capacity for long life
- Fixed pore structure
- Melt-sealed construction
- Broad chemical compatibility
- Manufactured for use in conformance with cGMP
- ISO 9000 Certified Quality System

### Specifications

#### Materials of Construction

- Medium: Bonded glass fiber, positive Zeta
- Support/Drainage: Polyester
- Core/Cage/End Caps: Polypropylene O-Ring: Silicone<sup>1</sup>

#### Removal Ratings (liquid)<sup>2</sup>

- 1 µm, 2 µm, 3 µm, 6 µm, 10 µm, 20 µm, 40 µm

#### Endotoxin Removal Efficiency<sup>3</sup>

- U010Z: ≥ 99.998%
- U2-20Z, U030Z: ≥ 99.97%

#### Latex Bead Removal Efficiency<sup>4</sup>

- U010Z (1 µm): ≥99.99% for 0.29 µm beads to 2.8 gm
- U2-20Z (20/2 µm): ≥99.99% for 0.8 µm beads to 22 gm
- U030Z (3 µm): ≥99.99% for 1.1 µm beads to 22 gm

#### Configuration (AB Code 7)<sup>5</sup>

- Single open ended cartridge
- Integral flange on downstream endcap

#### Dimensions (nominal)

- Lengths: 10 in. (254 mm), 20 in. (508 mm), 30 in. (762 mm), 4 in. (1016 mm)
- Diameter: 2.75 in. (70 mm)

### Operating Conditions<sup>6</sup>

- Max. Differential Pressure/Temp: 80 psid (5.5 bard) to 122°F (50°C), 55 psid (3.8 bard) to 180°F (82°C)

### Autoclaving/Steaming In Situ<sup>7</sup>

- Steamable in situ or autoclavable: Max. Temperature to 284°F (140°C)

<sup>1</sup> Other polymers available.

<sup>2</sup> >99.98% by mod. OSU-F2 Beta test.

<sup>3</sup> Efficiency in deionized water with up to 55-70 mg *E. coli* 055-B5 endotoxin per 10 in. (254 mm) modular element.

<sup>4</sup> Efficiency in deionized water per 10 in. (254 mm) modular element.

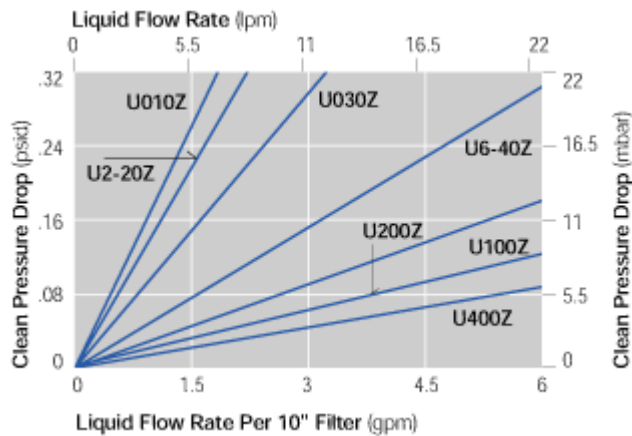
<sup>5</sup> Other adapter codes available.

<sup>6</sup> Using compatible fluids.

<sup>7</sup> Contact Pall for recommended procedures.

## Performance

### Pressure Drop vs. Liquid Flow Rate<sup>8</sup>



### Filter Areas

Per 10 in. (254 mm) Element (nominal)

4.2 ft<sup>2</sup> (3900 cm<sup>2</sup>)

4.4 ft<sup>2</sup> (4000 cm<sup>2</sup>)

5.3 ft<sup>2</sup> (4900 cm<sup>2</sup>)

6.0 ft<sup>2</sup> (5600 cm<sup>2</sup>)

6.0 ft<sup>2</sup> (5600 cm<sup>2</sup>)

7.0 ft<sup>2</sup> (6500 cm<sup>2</sup>)

5.4 ft<sup>2</sup> (5000 cm<sup>2</sup>)

<sup>8</sup> Typical initial clean media  $\Delta P$  per 10 in. (254 mm) element; water at 68 °F (20 °C); viscosity 1 centipoise. For assistance in filter assembly sizing and housing selection, contact your local Pall distributor.

## Ordering Information

Part Number* <sup>9</sup>	Length Code*	Removal Rating
AB* U400Z7H4	1, 2, 3 or 4	40 µm
AB* U200Z7H4	1, 2, 3 or 4	20 µm
AB* U100Z7H4	1, 2, 3 or 4	10 µm
AB* U6-40Z7H4	1, 2, 3 or 4	6 µm
AB* U030Z7H4	1, 2, 3 or 4	3 µm
AB* U2-20Z7H4	1, 2, 3 or 4	2 µm
AB* U010Z7H4	1, 2, 3 or 4	1 µm

\* Select Length Code: 1=10 in. (254 mm); 2=20 in. (508 mm); 3=30 in. (762 mm); 4=40 in. (1016 mm). Dimensions are nominal.

<sup>9</sup> U6-40Z and U2-20Z are multilayer graded composites; 40 to 6 µm and 20 to 2 µm, respectively. Z in part number designates positive Zeta in aqueous service. 7 indicates Code 7 adapter (standard). See Appendix for alternate adapter descriptions and Codes. H4 suffix=Silicone O-rings (standard). Ethylene Propylene and Fluorocarbon Elastomer O-rings also available. See Appendix for alternate polymer codes.

**Note:** Contact your local Pall distributor for additional information, including special P option stainless steel ring reinforced adapter required for steaming in situ.

**Specifications and availability:** The information provided is a guide to the part number structure and possible options. Product availability may be subject to change without notice. All specifications are nominal. This literature was reviewed for accuracy at the time of publication. For current information on the product and test methodologies, consult your local Pall distributor.

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