PALL Food and Beverage

# Ultipor® GF Plus Filter Cartridges
## For Particle Removal

Ultipor GF Plus filter cartridges are made with positive Zeta modified glass fiber media for enhanced filtration efficiency for fluids in the food and beverage industry.

## Description

In addition to a high particulate removal efficiency and low pressure drop, the positive charge enables the Ultipor GF Plus filter to effectively remove submicron haze particles from a wide variety of aqueous and slightly alcoholic food and beverage products. The single open ended (SOE) configuration is designed to fit into sanitary housings.

Ultipor GF Plus filter cartridges are suitable for exposure to repeated hot water and *in situ* steam sanitization cycles for longer service life.

## Features and Benefits

| Features | Benefits |
|---|---|
| Fixed fiber matrix with no adhesives or surfactants | • Process reliability<br>• Highly stable structure maintains performance with pulsed flow conditions<br>• Consistent filtrate quality |
| Pleated media with high dirt holding capacity and positive Zeta potential | • Long service life<br>• Low operating costs<br>• Hot water sanitizable<br>• Steam sterilizable |
| Multiple adaptor options | • Easy installation into sanitary housings |

## Quality

- Cartridges produced in a controlled environment
- Manufactured according to ISO 9001:2008 certified Quality Management System

Ultipor GF Plus Filters

## Food Contact Compliance

Please refer to the Pall website http://www.pall.com/foodandbev for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.

## Materials of Construction

| | |
|---|---|
| Filter Medium | Resin bonded glass fibers on a polyester substrate |
| Support and Drainage | Polyester |
| Core, Cage, End Cap and Fin End | Polypropylene |
| Adaptor | Polypropylene with internal stainless steel reinforcing ring |
| O-ring seal | Ethylene propylene rubber or Silicone elastomer |

# Technical Information

## Operating Characteristics in Compatible Fluids[1]

| Maximum Differential Pressure | Operating Temperature |
|---|---|
| 5.5 bard (80 psid) (forward pressure) | 50 °C (122 °F) |
| 4.1 bard (60 psid) (forward pressure) | 80 °C (176 °F) |
| 300 mbard (4.4 psid) (reverse pressure) | In normal operation or *in-situ* steam sterilization |

[1] Compatible fluids are defined as those which do not swell, soften or attack any of the filter components.

## Sterilization and Sanitization

| Media | Temperature | Cumulative Time / 30 minute Cycles[2] |
|---|---|---|
| Steam | 125 °C (257 °F) | 25 hours / 50 cycles |
| Hot Water | 85 °C (185 °F) | 25 hours / 50 cycles |

[2] Measured under laboratory test conditions. The actual cumulative time depends on the process conditions. For applications requiring Sterilization or Sanitization Pall recommends the use of Code 7 adaptors to ensure filter sealing after cooling. Cartridges should be cooled to system operating temperature prior to use. Contact Pall for recommended procedures.

## Performance

| Media | Particulate rating (ß-5000) | Pressure Drop *vs* Liquid Flow Rate[3] per 10" element |
|---|---|---|
| GFHZ | ≤ 1 micron | 10 - 15 mbar at 10 L/min (0.15 - 0.22 psi at 2.6 US gallons/min) |
| GFNZ | ≤ 2 micron | ~7 mbar at 10 L/min (~0.1 psi at 2.6 US gallons/min) |

[3] Typical initial clean media differential pressure (dP) per 250 mm (10") cartridge for water at 20 °C (68 °F); viscosity 1 centipoise. For 508, 762 mm and 1016 mm configurations divide the differential pressure by 2, 3, and 4 respectively.

# Ordering Information

This is a guide to the Part Numbering structure only.
For specific options, please contact Pall.

## Cartridge Part Number:

AB ☐ GF ☐ Z ☐ W ☐
Table 1 Table 2 Table 3 Table 4

### Table 1 : Nominal Length

| Code | Description |
|---|---|
| 1 | 254 mm (10") |
| 2 | 508 mm (20") |
| 3 | 762 mm (30") |
| 4 | 1016 mm (40") |

### Table 2 : Removal Rating

| Code | Description |
|---|---|
| H | ≤ 1 micron |
| N | ≤ 2 micron |

* ß-5000 as determined by F2 test

### Table 3 : Adaptor

| Code | Description |
|---|---|
| 3 | SOE – single open end with flat closed end and external 222 O-rings |
| 7 | SOE – single open end with fin end, 2 locking tabs and external 226 O-rings |
| 8 | SOE – single open end with fin end and external 222 O-rings |
| 28 | SOE – single open end with fin end, 3 locking tabs and external 222 O-rings |

### Table 4 : O-Ring Seal Material

| Code | Description |
|---|---|
| H4 | Silicone Elastomer |
| J | Ethylene Propylene Rubber |


Pall Corporation

Pall Food and Beverage

25 Harbor Park Drive
Port Washington, NY 11050
+1 516 484 3600 telephone
+1 866 905 7255 toll free US


**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.



*Filtration. Separation. Solution.SM*


FBUGFWEN June 2011