



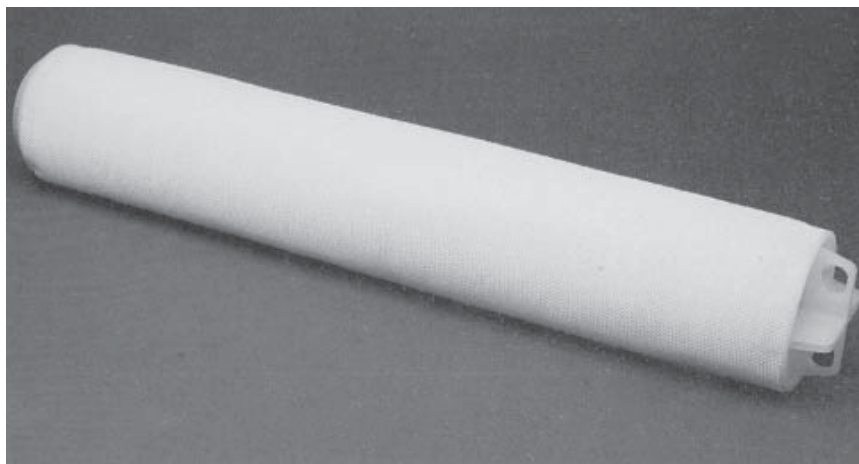
# High Flow Filter Cartridges

## Series PERP-740-KF



*Creative Answers Shaping Cleaner Environments*

### Technical Data



### Features, Advantages and Benefits

The 3M™ High Flow Filter Cartridge, PERP-740-KF that incorporates the patented radial pleat, puts an extraordinary amount of surface area into a single cartridge. This results in the following:

- High loading capacity for long life and lower cost filtration.
- Fewer cartridges for fewer change-outs, thus less labor cost.
- Fewer seals reduced risk of bypass, thus high quality.
- Extremely low disposal costs, less than a tenth of some cartridges.

Designed to fit in a range of vessels that holds from one to over 37 filters for a wide range of flow rates in competitively priced hardware.

- Double O-ring seals in a variety of material options means:
- Extremely low risk of bypass for high quality fluids.
- No loose parts to assemble for easy installation, thus less labor cost.
- Also, no springs and caps to lose reduce the risk of bypass.
- Broad chemical compatibility for many applications.

FDA compliant polyester microfibre filter media provides high particle removal efficiency for high quality filtration with broad chemical compatibility.

A convenient handle for easy manual or mechanical removal.

### Materials of Construction

#### Filter Media:

Polyester microfibers.

#### Inner Core, Outer Sleeve and End Caps:

Polyester

#### O-rings:

##### Product Number

##### Material

7010	FDA Buna N (standard)
7011	Ethylene Propylene Rubber
7012	PTFE encapsulated Silicone
7013	FDA Silicone
7014	Fluoroelastomer

### Applications

#### Prefilters or final filters for:

- Fuel Transfer
    - Diesel Fuel
    - Gasoline
    - Jet Fuel
    - Kerosene
  - Desalination
  - Liquors
  - Hydraulic oil
  - Lubricating oils
  - Machine oils and coolants
  - Completion fluids
  - Carbon beds
  - Edible oils
  - Organic solvents
- + Other chemically compatible applications

*(It is recommended that you contact your distributor or 3M to obtain polyester samples for evaluating chemical compatibility.)*

## Performance Data

### Loading Capacity

Product Number	PERP-747-KF	PERP-749-KF
Pound at 40 gpm	14.9	25.0
Kilograms at 9cu m/hr	6.7	11.3

**Loading:** Loading capacity is extremely high due to the large amount of surface area available. The data above shows typical loading capacities of the different micron rated filters. Loading capacity is determined by challenging a filter with a dispersion of silica test dust in water at the recommended flow rate. Pressure drop is monitored and testing is terminated at 50 psid (3.4 bar). The loading capacity reported is the dry weight gain of the cartridge.

### Particle Removal Efficiency (microns)

Product Number	PERP-747-KF	PERP-749-KF
Efficiency @ 99%	20	60
Efficiency @ 95%	13	38
Efficiency @ 90%	11	30
Efficiency @ 75%	8	19
Efficiency @ 50%	5	12

**Efficiency:** The 3M™ High Flow Filter Cartridges are rated using a silica test challenge in water at 40 gpm (9 cu m/hr). The results reported are typical initial efficiencies taken within ten minutes of the start of the test. For more information on how 3M conducts its filter efficiency testing, please see "Defining Filter Efficiency" a 3M Technical Report available from your local distributor.

### Clean Pressure Drop versus Flow Rate (psid)

Product Number	PERP-747-KF	PERP-749-KF
$\Delta p$ @ 20 gpm	0.1	0.1
$\Delta p$ @ 40 gpm	0.2	0.2
$\Delta p$ @ 60 gpm	0.4	0.4
$\Delta p$ @ 80 gpm	0.5	0.5

**Pressure Drop:** The 3M™ High Flow Filter Cartridges have low initial pressure drop ( $\Delta p$ ) in water as the chart indicates. The chart does not include the pressure drop of the vessel, which must be added in when sizing your filter system.

### Pricing (Effective Date 3/15/02. Prices subject to change without notice.)

Product Number	Stock Number	List Price
PERP-747 KF	70-0708-1450-7	\$240.00
PERP-749 KF	70-0708-1451-5	\$240.00

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### Filtration Products

3M Center, Building 60-1S-16  
St. Paul, MN 55144-1000  
800-648-3550



85% Pre-consumer waste paper  
15% Post-consumer waste paper

## Product Specifications

### Micron Ratings:

Product Number	Initial Efficiency
PERP-747-KF	20 micron @ 99%
PERP-749-KF	60 micron @ 99%

### Dimensions (nominal):

**Outer Diameter:**  
6.5 inches 16.5 cm

**Inside Diameter:**  
1.6 inches 4 cm

**Length:**  
39 inches 100 cm

**226 O-ring Inside Diameter:**  
2 inches 5 cm

**226 O-ring Thickness:**  
0.14 inches 0.35 cm

### Operating Conditions:

**Maximum Operating Temperature\*\*:**  
240F 115C

\*\*Check compatibility charts or conduct a soak test for specific fluids.

### Recommended Flow:

(for normal loading - viscosity + water)  
40 gpm 9 cu m/hr

**Suggested Maximum Flow:**  
(viscosity = water)

747 – 80 gpm 18 cu m/hr  
749 – 80 gpm 18 cu m/hr

### Suggested Maximum Differential

**Pressure:**  
50 psid 3.4 bar

Disposal of used cartridges must comply with applicable federal, state and local laws and regulations.

### Order Information

Contact your local 3M Filtration Products distributor or call toll free 1-800-648-3550.