



Particulate Filter Elements

PRODUCT FEATURES / BENEFITS

- ◆ Completely Disposable
- ◆ Suitable For Corrosive Applications
- ◆ High Flow Rates, Low Pressure Drop
- ◆ Custom Sizes Available
- ◆ Up To 0.01 Micron Particle Efficiency
- ◆ Natural Gas
- ◆ Corrosive Gas Filtration
- ◆ Instrumentation & Analytical Protection
- ◆ Particulate Filtration

Our microfiber disposable filter elements are manufactured from precisely controlled blends of 100% borosilicate glass microfibers and produced to rigorous quality standards. The highly uniform microfiber matrix delivers exceptional filtration efficiency while maintaining very low pressure drop, ensuring effective particulate removal without altering the sample—making these elements ideal for analytical applications.

With a void volume exceeding 90%, the filter structure provides high contaminant holding capacity and extended service life. Particles are captured throughout the full depth of the element, increasing usable surface area and maintaining consistent performance over time.



The microfibers are chemically bonded to provide high mechanical strength, dimensional stability, and resistance to fiber migration or shedding under operating conditions. Multiple binder systems are available, allowing element construction to be optimized for specific fluid compatibility, operating temperatures, and corrosive environments. As a result, these elements are suitable for high-temperature, highly corrosive, and emissions-related applications.

Environmental, emissions, and sample conditioning filtration present unique challenges due to corrosive service conditions, elevated temperatures, and the analyzer's requirement for a clean, representative sample. To address these demands, we offer one of the industry's widest selections of microfiber borosilicate glass filter elements, with binder formulations tailored to specific operating requirements.

Fiber size and binder blends can be customized to optimize filtration performance for individual applications. Please consult our technical team with your specific requirements so we may recommend the optimal solution.

K Grade – Non-Reactive PVDF Binder

Elements are specified for particulate removal where corrosive gases are to be filtered as they have excellent chemical resistance. They are also used when highly reactive gases are being analyzed since they exhibit very low levels of adsorption. The borosilicate microfiber provides relatively high flow rates with low pressure drops which is critical in any analytical application. The PVDF binder creates a non-reactive surface which allows accurate sample analysis.

K Grade Elements offer all around high efficiency particulate filtration.

Typically Used with Our SS, PTFE & Kynar Sample Conditioning Products.

TECHNICAL INFORMATION

Materials of Construction:	Borosilicate Microfiber Glass with PVDF Fluorocarbon Resin Binder
Type of Application:	Particulate Analytical, Emission Testing, Sample Conditioning
Maximum Temperature:	300°F
Appearance:	Off-White Toasted Color
Flow Direction:	Typically Outside to Inside

Efficiency at 0.01 microns. Suffix Grade designation:

99.99998%	99.9999%	+99.99%	+99.5%	+95%	+75%
30K	40K	50K	60K	70K	80K



Our 70K is the recommended standard grade element that provides good particulate efficiency with high flow rates and long element life.

S Grade – High Temperature Silica Inorganic Resin

S Grade elements are completely inorganic and specifically designed to be used in automotive and diesel particulate filter applications where sampling is above 300°F (150°C). These elements have the ability to function up to 900°F (480°C).

Typically Used with Our SS Sample Conditioning Filters and H Series Heatable Housings.

TECHNICAL INFORMATION

Materials of Construction:	Borosilicate Microfiber Glass with Silica Inorganic Resin
Type of Application:	Emissions / Stack Gas
Maximum Temperature:	900°F
Appearance:	White in Color
Flow Direction:	Typically Outside to Inside

Efficiency at 0.01 microns. Suffix Grade designation:

99.99998%	99.9999%	+99.99%	+99.5%	+95%	+75%
30S	40S	50S	60S	70S	80S



Our 70S is the recommended standard grade element that provides good particulate efficiency with high flow rates and long element life.

ET Grade – PVDF Proprietary for Automotive Emission Testing

These elements are hydrocarbon-free filters developed to remove particulate for automotive/diesel emission testing up to 400°F.

TECHNICAL INFORMATION

Materials of Construction:	Borosilicate Microfiber Glass with PVDF Proprietary
Type of Application:	Automotive Emission Testing
Maximum Temperature:	400°F
Appearance:	Off-White Toasted Color
Flow Direction:	Typically Outside to Inside



Efficiency at 0.01 microns. Suffix Grade designation:

99.99998%	99.9999%	+99.99%	+99.5%	+95%	+75%
30ET	40ET	50ET	60ET	70ET	80ET

Our 70ET is the recommended standard grade element that provides good particulate efficiency with high flow rates and long element life.

S21-R Diesel Emissions with Heavy Particulate

The **S21-R Type** elements are constructed with a loose inner layer designed to provide more surface area thus capturing diesel particles without blinding off the element. The final stage of filtration is accomplished by the outside layer of the element.

Typically Used with Our H Series Tie Rod Heatable Housings.

TECHNICAL INFORMATION

Materials of Construction:	Borosilicate Microfiber Glass with Silica Inorganic Resin Binder
Type of Application:	Heavy Diesel Emissions
Maximum Temperature:	900°F
Appearance:	White In Color
Flow Direction:	Inside to Outside



Efficiency at 0.01 microns. Suffix Grade designation:

99.99998%	99.9999%	+99.99%	+99.5%	+95%	+75%
N/A	N/A	50S21-R	60S21-R	70S21-R	N/A

Our 70S21-R is the recommended standard grade element that provides good particulate efficiency with high flow rates and long element life.

E Grade – OEM Particulate Filtration

These elements are suitable for general particulate removal in non-corrosive gases and liquids. The coarsest grade that provides adequate protection for the application should be selected, as this delivers the most economical solution to contamination control. As our most cost-effective particulate filters, these elements are commonly specified for OEM applications.

Typically Used in OEM Applications.

TECHNICAL INFORMATION

Materials of Construction:	Borosilicate Microfiber Glass with Epoxy Ester Resin
Type of Application:	Particulate Only
Maximum Temperature:	300°F
Appearance:	Light Manilla Color
Flow Direction:	Outside to Inside



Efficiency at 0.01 microns. Suffix Grade designation:

99.99998%	99.9999%	+99.99%	+99.5%	+95%	+75%
30E	40E	50E	60E	70E	80E

Our 70 is the recommended standard grade element that provides good particulate efficiency with high flow rates and long element life.

L Grade – Sterile Air

These elements are bonded with a hydrophobic binder making them ideal for use where steam sterilization is required. The silicone binder prevents the pores from being filled with condensate, which can encourage bacterial growth. Maximum recommended steam pressure is 60 PSIG.

TECHNICAL INFORMATION

Materials of Construction:	Borosilicate Microfiber Glass with Silicone Resin
Type of Application:	Sterile Air Applications
Maximum Temperature:	300°F
Appearance:	White In Color
Flow Direction:	Outside to Inside



Efficiency at 0.01 microns. Suffix Grade designation:

99.99998%	99.9999%	+99.99%	+99.5%	+95%	+75%
N/A	40L	N/A	N/A	N/A	N/A

In air applications the 40L element must be protected by two coalescing (70C and 50C) pre-filters, which remove solids, and any liquids within the system. The 40L element remains dry. The 40L element can be independently steam sterilized in an air system to discourage bacterial growth.

Acid Wash Elements – Selective Catalytic Reduction

K Grade and S Grade filter elements are suitable for Selective Catalytic Reduction (SCR) applications. When processed using a specialized Acid Wash (AW), these elements are capable of capturing excess ammonia introduced into the emission stream. Ammonia scrubbing occurs through a chemical bonding mechanism between the ammonia (NH₃) and the phosphoric acid-washed filter media, helping to protect downstream analyzers and other sensitive equipment.

See our brochure on Acid Wash (SCR) Elements.

Ordering Information

All disposable filter elements have a part number arranged with three figures, e.g. 25-64-70C. The first figure refers to the inside diameter, the second figure refers to the overall length and the third position refers to the grade designation. Replace the 'XX' in the part numbers with the grade designation. Please enquire with specific requirements.

Grades Available:

30 (99.99998%); 40 (99.9999%); 50 (+99.99%); 60 (+99.5%); **70 (+95%)**; and 80 (+75%)

Example Part Number: 25-178-70K

Standard Sizes Offered Per Grade / Type							
Size	K Grade	S Grade	ET Grade	S21-R Grade	E Grade	L Grade	Acid Wash
12-25-xx	YES	YES	-	-	YES	-	-
12-32-xx	YES	YES	-	-	YES	YES	-
12-57-xx	YES	YES	YES	YES	YES	YES	YES
12-83-xx	YES	YES	-	-	YES	YES	-
25-51-xx	YES	YES	YES	-	YES	-	YES
25-64-xx	YES	YES	YES	YES	YES	YES	YES
25-127-xx	YES	YES	YES	YES	YES	YES	-
25-178-xx	YES	YES	YES	YES	YES	YES	YES
38-58-xx	YES	YES	YES	-	YES	YES	-
38-152-xx	YES	YES	YES	-	YES	YES	-
51-89-xx	YES	YES	-	-	YES	-	-
51-230-xx	YES	YES	-	-	YES	YES	-
51-476-xx	YES	YES	-	-	YES	YES	-
63-762-xx	YES	YES	-	-	YES	-	-

We are able to produce elements with the inner diameters from 0.27" (7mm) to 3.94" (100mm), and lengths from 0.3.94" (10mm) to 39.4" (1000mm).

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