



***"A leading worldwide supplier of high efficiency filters for a variety of industries and applications."***

## COALESCING FILTER ELEMENTS

**Our Microfiber disposable filter elements** are manufactured from precise mixtures of borosilicate glass microfibers to the very highest standards. These elements offer exceptional filtration efficiency at very low-pressure drops and being +90% void volume give very long service life.

The elements are bonded to impart high strength and eliminate fiber shedding. The choice between the different binders available will depend upon the application. Each type of element is available in a wide range of efficiencies covering the complete range from coarse bulk contamination removal (grade 80) to essentially complete removal of sub-micron contaminants.



### Features:

- High Efficiency Coalescing
- Completely Disposable
- Suitable For Corrosive Applications
- High Flow Rates, Low Pressure Drops
- Custom Sizes Available
- Suitable For Highly Adsorbent Gases
- Gas Or Liquid Service
- Complete Removal Of Sub-Micron

### Applications:

- Coalescing Filtration
- Natural Gas
- Corrosive Gas Filtration
- Off-Shore
- Instrumentation
- Particulate Filtration
- Natural Gas Vehicle
- Analytical

At the heart of our coalescing filter is a completely disposable element, made entirely from borosilicate glass microfiber. The coalescing elements have a two-layer structure, an inner particle capture-layer and an outer drainage layer. Liquid droplets remain mobile once captured and travel through the fine-pored captured-layer, along the intersecting microfibers, growing in size as they progress. These coalesced droplets are transferred to the large-pored drainage layer from where they drain by gravity into the filter bowl. Our coalescing elements are completely self-supporting and are sealed into the filter housing simply by tightening a retaining nut. No end caps, gasketing materials or support cores are required. Our coalescing elements are designed to have an initial dry pressure drop of less than 2 psi. Thereafter the pressure drop will increase very slowly as solid particles are captured and retained in the capture-layer of the element. We recommend changing the filter element when the pressure drop reaches 10 psi.

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## C Grade

Elements are specifically designed for the removal of liquid aerosols and particulate from gases in both corrosive and non-corrosive applications. The C type element is constructed of two layers of borosilicate microfiber. The first (inner layer) is comprised of very fine fiber and is more densely packed to capture microscopic aerosols. The outer layer is made up of slightly larger fibers which allow the captured liquids to pass through the depth of the wall and drain off the filter element. This two-layer design is critical to proper coalescing, and borosilicate microfiber is best suited for this function. Coalescing elements should always flow from the inside to the outside of the element so that proper draining of liquids can occur. These elements will simultaneously collect particulates. The C grade element has an off-white toasted color due to the fluorocarbon resin binder. This is normal and does not affect the performance of the element.

## CS Grade

Elements are designed for high temperature coalescing applications good to 900°F. **Excellent for heavy coalescing.** These elements mimic the C grade, only with a silica binder rather than a PVDF one.

## RC Grade

Elements are designed for high pressure coalescing applications. These elements consist of a borosilicate glass inner layer sandwiched between two, rayon/phenolic layers. The reinforced inner/outer layers provide excellent strength.

## K Grade

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.

## S Grade

Elements are completely inorganic and are used to filter particulate at temperatures from 300°F to 900°F. The **S21-R Type** are used in diesel emission applications.

## ET Grade

Elements are hydrocarbon-free filters developed to remove particulate for automotive emission testing up to 400°F.

## Standard Grade

Elements are suitable for all particulate removal applications in non-corrosive gases and liquids. The coarsest grade that will adequately protect the application should be chosen, as this will result in the most economical solution to the contamination problem.

## L Grade

Elements have a hydrophobic binder, making them ideal for applications where sterilization is required.

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## TECHNICAL INFORMATION

Element Grade Binder Type	Type of Application	Maximum Temp. (°F)	Efficiency at 0.01 microns. Suffix Grade designation:					
			99.99998%	99.9999%	+99.99%	+99.5%	+95%*	+75%
<b>C Grade</b> PVDF Fluorocarbon Resin	Coalescing - Instrumentation	300	30C	40C	50C	60C	70C	80C
<b>CS Grade</b> Silica Inorganic Resin	High Liquid	900	30CS	40CS	50CS	60CS	70CS	80CS
<b>RC Grade</b> Phenolic Resin	Heavy Particle & Coalescing	250	N/A	N/A	RC1	N/A	RC	N/A
<b>K Grade</b> PVDF Fluorocarbon Resin	Particulate Analytical	300	30K	40K	50K	60K	70K	80K
<b>S Grade</b> <b>S21-R Grade</b> Silica Inorganic Resin	Emissions Stack Gas	900	30S	40S	50S	60S	70S	80S
<b>ET Grade</b> PVDF Proprietary	Emissions	400	30ET	40ET	50ET	60ET	70ET	80ET
<b>Standard Grade</b> Epoxy Ester Resin	Particulate Only	300	30	40	50	60	70	80
<b>L Grade</b> Silicone Resin	Sterile Air Applications	400	N/A	40L	N/A	60L	N/A	N/A

Note: (\*) The 70 grade elements are formulated to give 95% efficiency against 0.01 microns while exhibiting a low pressure drop. We advise starting with this grade of element for best results. For example, if you have a coalescing application, then use the 70C grade, or if you need protection on your hot stack gas analyzer, we recommend using the 70S, because this efficiency rating offers the best flow rates with uncompromised efficiency.

### Dimensions:

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

### Example Part Number: 25-178-70C

#### Below is list of standard size elements that we offer:

12-25-xx	25-178-xx
12-32-xx	38-58-xx
12-57-xx	38-152-xx
12-83-xx	51-89-xx
25-51-xx	51-230-xx
25-64-xx	51-476-xx
25-127-xx	63-762-xx

We are able to produce elements with the inner diameters from 0.27" (7mm) to 3.94" (100mm), and lengths from 0.394" (10mm) to 39.4" (1000mm).