



## Seitz® K Series Depth Filter Sheets

For a Wide Range of Food and Beverage Applications

Seitz K series depth filter sheets were developed to meet the entire range of removal requirements in the food and beverage industry.

### Description

From the selection and quality control of raw materials to application of the latest production technologies, the K filter sheets meet the highest quality standards.

K filter sheets are available in multiple grades suitable for microbial reduction and applications requiring fine, clarifying and coarse filtration.



Seitz K Series Filter Sheets

Features	Benefits
Homogenous and consistent media, available in multiple grades	<ul style="list-style-type: none"> <li>Suitable for a variety of applications</li> <li>Proven performance</li> <li>Reliable microbial reduction with tighter grades</li> </ul>
A combination of surface, depth and adsorptive filtration	<ul style="list-style-type: none"> <li>High solids retention</li> <li>Very good permeability</li> <li>Excellent filtrate quality</li> </ul>
Each individual filter sheet is laser etched with the sheet grade, batch number and production date.	<ul style="list-style-type: none"> <li>Full traceability</li> </ul>

### Quality

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

### Food Contact Compliance

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

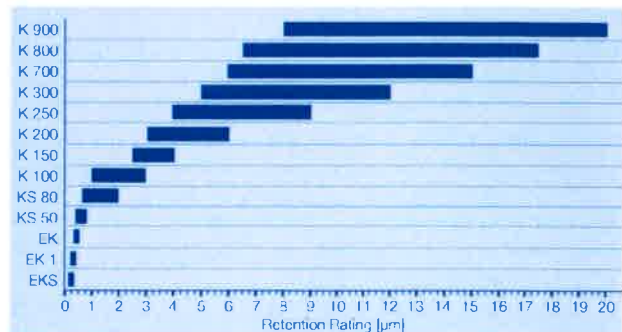
### Main Constituents

Cellulose, diatomaceous earth (DE, Kieselguhr), perlite.

### Applications

Grade	Application
EKS EK 1 EK	Microorganism reduction and yeast removal in wine Final filtration of juice and juice concentrate Microorganism reduction in sugar syrups Microorganism reduction in enzyme solutions
KS 50 KS 80	
K 100 K 150 K 200 K 250 K 300	Polishing of wine Prefiltration of juice prior to final membrane filtration Haze removal in apple juice
K 700 K 800 K 900	Wine clarification Particle removal from fruit juice and tea-based drinks Prefiltration of juice concentrate Olive oil polishing Enzyme solution and sweetener clarification

### Relative Retention Rating<sup>1</sup>



<sup>1</sup> Effective removal performance of filter sheets is dependent on process conditions.

## Characterization

Grade	Mass per Unit Area g/m <sup>2</sup>	Thickness mm	Ash %	Water Permeability <sup>2</sup> L/m <sup>2</sup> /min (gal/ft <sup>2</sup> /min)
EKS	1400	3.7	58	29 (0.7)
EK 1	1450	3.8	51	41 (1)
EK	1400	3.8	46	68 (1.7)
KS 50	1350	3.7	46	93 (2.3)
KS 80	1350	3.7	46	113 (2.8)
K 100	1350	3.7	46	146 (3.6)
K 150	1350	3.9	46	185 (4.6)
K 200	1350	3.9	46	213 (5.2)
K 250	1250	4.0	46	510 (12.5)
K 300	1250	4.2	46	785 (19.3)
K 700	1250	4.1	46	925 (22.8)
K 800	1250	4.1	46	1275 (31.4)
K 900	1200	4.3	46	1700 (41.8)

These figures have been determined in accordance with in-house test methods and the methods of the Technical / Analytical Work Group within the European Depth Filtration Association.

<sup>2</sup>The permeability was measured under test conditions with clean water at 20 °C (68 °F) and a  $\Delta p$  of 1 bar (14.5 psi).

## Regeneration

K series filter sheets may be rinsed with clean water (in the forward or reverse<sup>3</sup> direction) to increase throughput and to optimize economic efficiency. Optimal regeneration of filter sheets installed in a plate and frame filter may be achieved with serial rinses of warm water followed by hot water. An example protocol is shown below.

1. Rinse with warm water (60 °C / 140 °F) for 15 minutes
2. Rinse with hot water (70 – 80 °C / 158 – 176 °F) for 8 – 10 minutes

The rinse flow rate should be equivalent to the filtration flow rate with a back pressure of 0.5 – 1 bar (7.2 – 14.5 psi).

<sup>3</sup>When rinsing in the reverse flow direction it is critical to control particulate and microbial levels in the rinse water so that the filtrate side of the sheet is not contaminated. Water used for reverse flow flushes should be particle-free, and if the filter will not be sterilized prior to re-use the water should be free of microbes. Backwashing should be in a diagonal direction from outlet to inlet in a plate and frame filter.

## Sterilization and Sanitization

Method	Temperature °C (°F)	Maximum Differential Pressure bar (psi)	Time <sup>4</sup> / Cycle min
Steam	125 (257)	0.5 (7.2)	20
Hot Water	90 (194)	1 (14.5)	30

<sup>4</sup>The actual time required may vary as a function of the process conditions.

## Filtration Guidelines<sup>5</sup>

For achieving optimal filtrate quality, the following flow velocities and differential pressures should not be exceeded:

Grade	Description	Flow Velocity L/m <sup>2</sup> /h (gal/ft <sup>2</sup> /h)	Maximum Differential Pressure bar (psi)
EKS, EK 1, EK, KS 50, KS 80	Fine Filtration	525 (12.9)	1.5 (21.8)
K 100, K 150, K 200, K 250, K 300	Polish Filtration	850 (20.9)	3 (43.5)
K 700, K 800, K 900	Coarse Filtration	850 (20.9)	3 (43.5)

<sup>5</sup>Please contact Pall for recommendations on your specific filtration process as results may vary by product, pre-filtration and filtration conditions.

For additional operating guidelines, including rinsing of sheets prior to use, please refer to instructions provided by Pall.

## Available Sheet Formats

### Rectangular Sheets

400 mm x 400 mm (15.8" x 15.8")  
600 mm x 612 mm (23.6" x 24.1")

Other formats are available on request.

Seitz K series filter sheets are also available in SUPRADisc™ II module configurations. Please contact Pall.



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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.

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