

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.

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

Features

Homogenous and consistent media, available in multiple grades

A combination of surface, depth and adsorptive filtration

Each individual filter sheet is laser etched with the sheet grade, batch number and production date.

Benefits

- Suitable for a variety of applications
- Proven performance
- Reliable microbial reduction with tighter grades

- High solids retention
- Very good permeability
- Excellent filtrate quality

- Full traceability

Quality

Manufactured according to ISO 9001 certified Quality Management System

Main Constituents

Cellulose, diatomaceous earth (DE, Kieselguhr), perlite



Seitz K Series Filter Sheets

Applications

Grade	Application
EKS	Microorganism reduction and yeast removal in beverages, e.g. Wine, Beer, AFB
EK 1	
EK	
KS 50	
KS 80	
K 100	Polishing filtration beverages
K 150	Prefiltration of juice prior to final membrane filtration
K 200	Haze removal in apple juice
K 250	Particle removal at higher turbidity levels, clarification
K 300	
K 700	
K 800	Particle removal from fruit juice and tea-based drinks
K 900	Prefiltration of juice concentrate
	Olive oil polishing
	Enzyme solution and sweetener clarification

Characterization

Grade	Mass per Unit Area g/m ²	Thickness mm	Ash %	Water Permeability ¹ L/m ² /min (gal/ft ² /min)
EKS	1400	3.7	58	29 (0.7)
EK1	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.

¹ The permeability was measured under test conditions with clean water at 20 °C (68 °F) and a Δp of 1 bar (14.5 psi).

Regeneration

Seitz K series filter sheets may be rinsed with clean water (in the forward or reverse² 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).

² 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 ³ /Cycle min
Steam	125 (257)	0.5 (7.2)	20
Hot Water	90 (194)	1 (14.5)	30

³ The actual time required may vary as a function of the process conditions.

Filtration Guidelines⁴

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

Grade	Description	Flow Velocity L/ m ² /h (gal/ft ² /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	Polishing	850 (20.9)	3 (43.5)
K 700, K 800, K 900	Coarse filtration	850 (20.9)	3 (43.5)

⁴ 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")

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