

Seitz HR series depth filter sheets were developed to meet the production needs and requirements of the industrial enzyme industry.

Description

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

Due to a surface modification and the presence of polyolefin fibers, these sheets are suited for the filtration of cellulose-degrading enzyme solutions. The resulting structural properties lead to improved sealing and reduced edge losses.

Features	Benefits
Homogenous and consistent media, available in three grades	<ul style="list-style-type: none"> Suitable for a variety of applications in cellulase enzyme production Proven performance Reliable microbial reduction with tighter grades
Media stability due to high wet strength and media composition	<ul style="list-style-type: none"> Resistance to cellulose-degrading enzymes, resulting in improved sealing properties and reduced edge leakage Easy to remove after use High economic efficiency due to a long service life
A combination of surface, depth and adsorptive filtration, coupled with a positive zeta potential	<ul style="list-style-type: none"> High solids retention Very good permeability Excellent filtrate quality, especially due to retention of negatively charged particles
Each individual filter sheet is laser etched with the sheet grade, batch number and production date.	<ul style="list-style-type: none"> Full traceability

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 for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.

Seitz® HR Series Depth Filter Sheets For Cellulase Enzyme Filtration



Seitz HR Series Filter Sheets

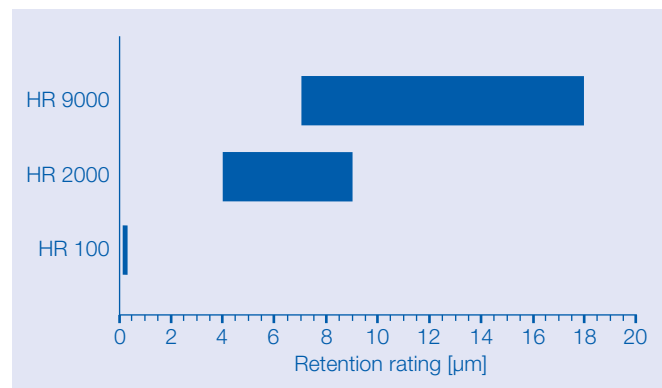
Main Constituents

Polyolefin fibers, cellulose, diatomaceous earth (DE, Kieselguhr), perlite.

Applications

Grade	Application
HR 100	Fine filtration and reduction of microorganisms in cellulase enzyme solutions
HR 2000	Cellulase enzyme clarification and fine filtration
HR 9000	Diatomaceous earth support sheet for cellulase enzyme filtration Coarse filtration of cellulase enzymes

Relative Retention Rating¹



¹ Effective removal performance of filter sheets is dependent on process conditions.

Characterization

Grade	Mass per Unit Area g/m ²	Thickness mm	Ash %	Water Permeability ² L/m ² /min (gal/ft ² /min)
HR 100	1360	3.9	46	51 (1.2)
HR 2000	1220	3.9	45	350 (8.6)
HR 9000	1200	4.8	45	1550 (38.1)

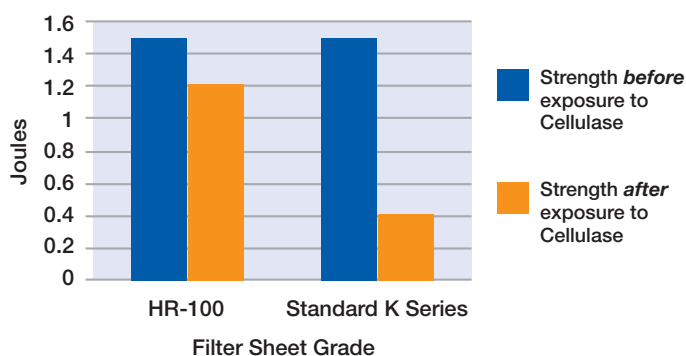
These figures have been determined in accordance with in-house test methods and the methods of the Technical / Analytical Work Group within the European Depth Filtration Association.

²The permeability was measured under test conditions with clean water at 20 °C (68 °F) and a Δp of 1 bar (14.5 psi).

Cellulase Resistance

Seitz HR and standard Seitz K series filter sheets were tested for their resistance to cellulase under controlled laboratory conditions. After immersion, the burst force of the samples was measured.

Filter Sheet Strength



HR sheets exhibit high wet strength when exposed to cellulase enzymes.

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

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

Filtration Guidelines⁴

As the filtrate quality can be impacted by the filtration flow rate, the following table provides guidelines for flux rate.

Application	Flow Velocity L/m ² /h (gal/ft ² /h)	Maximum Differential Pressure bar (psi)
Bacteria load reduction from cellulase enzymes	525 (12.9)	1.5 (21.8)
Cellulase enzyme fine filtration	525 (12.9)	3 (43.5)
Clarification of cellulase enzymes	850 (20.9)	3 (43.5)
Coarse filtration of cellulase enzymes	850 (20.9)	3 (43.5)

⁴Please 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 HR filter sheets are also available in SUPRApak™ and SUPRAdisc™ 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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