

PERMAdur S support filter sheets were developed to provide enhanced support reliability for precoat support applications in the food and beverage industry.

## Description

The production of PERMAdur S support sheets is based on the latest technological and scientific achievements in depth filter media.

The PERMAdur S support filter sheets are utilized in classic plate and frame filters serving as precoat support. Essentially the service life, and consequently the total throughput of a diatomaceous earth (DE, kieselguhr) supporting sheet, is determined by the quality of the DE and the support structure of the sheet. It is important that no solid particles enter the structure of the support sheet.

# PERMAdur® S Support Filter Sheets

## For Reliable Support Properties



PERMAdur S Filter Sheets

Features	Benefits
Component composition consistency and structure	<ul style="list-style-type: none"> <li>Sheet measurements remain largely constant</li> <li>Reduced appearance of swelling in the DE filter during filtration</li> <li>May be removed from the filter intact without risk of damage or tearing.</li> <li>Improved support sheet release from the plate and frame filters</li> </ul>
Synthetic microfibers	<ul style="list-style-type: none"> <li>Retention of wet strength even with repeated hot sanitizations</li> <li>Service life up to 30% longer than conventional support sheets</li> <li>No sticking</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>
Packing label includes sheet grade, batch, identification number and a fork and glass symbol.	<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.

## Materials of Construction

Main components: Celluloses, Polyolefin fibers

Components <3%: Resin

## Characterization

Mass per Unit Area g/m <sup>2</sup>	Thickness mm	Ash %	Heavy Metals* (ppm)	Permeability L/m <sup>2</sup> /min at 1 bar
900	3.5	<1	<50	4250

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.

\*According to recommendation XXXVI/1 of the BgW

Grade	Extractable ions soluble in 5% acetic Acid (mg/m <sup>2</sup> )		
	Ca	Fe	Al
PERMAdur S	800	5	15

## Suggested Operating Instructions

### Handling during installation

1. Place sheet over support plate of the plate and frame filter
2. For filters with manual tightening device: moisten filter sheets then tighten
3. For filters with hydraulic tightening device: tighten up to filter pre-pressure of 3000-3500 kPa (30-35 bar, 432-507 psi).  
Rinse the filter with warm water at ambient temperature in a forward flow direction with at a flow of at least 50 L/m<sup>2</sup>
4. Control and adjust the filter to a pre-pressure of 3000-3500 kPa (30-35 bar, 432-507 psi) and sterilize.

### Rinsing post filtration

1. Flush with water at a temperature of 50-55 °C (122-131 °F)
2. Flow in the forward direction: should be at least nominal filter output
3. Counter pressure ~ 50kPa (0.5 bar, 7.25 psi)
4. Duration: 10-15 minutes or until the rinse water is clear.

### Hot water flushing

1. Water temperature: >85 °C (185 °F)
2. Flow in the forward direction: minimal nominal filter output
3. Counter pressure ~ 50 kPa (0.5 bar, 7.25 psi)
4. Duration: until a temperature of at least 85 °C (185 °F) is achieved on the outlet side. Allow the filter to stand for at least 30 minutes with hot water. Open the vent valve on the filter inlet side.

### Steaming

1. Steam temperature: max 121 °C (250 °F), low pressure steam
2. Duration: 20 minutes.



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