

# TECHNICAL INFORMATION

## The Carlson EE all cellulose series

Carlson has specially developed this all cellulose range of products for a number of specific applications, particularly for filtration of high viscosity liquids and for controlled absorption and emission abilities. The EE series of filter sheets is manufactured in thicknesses ranging from 1.00 to 4.60mm and at high flow rates.

Manufactured from high quality 100% bleached cellulose fibres, the EE series is available both in normal and high wet strength versions depending on the required application. Because these sheets are made as an all cellulose grade they have very low metal and ion extractables.

The high wet strength grades are excellent for filtration of viscous liquids, even at elevated temperatures, e.g sugar syrups. The standard products find uses as extremely absorbent wicking materials in such diverse applications as diagnostic kits, air fresheners, insect repellents and insecticide units.

## Carlson EE/HF (high flow rate)

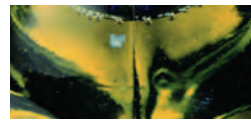
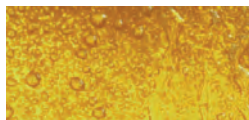
New filtration grades have been added to the EE all cellulose series to improve filtration performance at very high flow rates, by utilising both cellulose and perlites, along with approved resins.

Filtration applications include – sugar syrups, wet metallurgy, resins, pesticides, cooking oils, ointment bases, liquid soaps, silicone oils, lacquers, varnishes, inks.

Non-filtration applications include – diagnostic kits, air fresheners, insecticide units, insect repellents, liquid spills.

Physical Data						
Test properties units	Basic weight g/m <sup>2</sup>	Thickness mm	% Ash Content % weight (g)	Absorption Value		Flow rate litres/min/m <sup>2</sup> @0.3 bar
				Absorption ratio	g(water)/m <sup>2</sup>	
EE1.0H	450	1.00	1			
EE2.0H	500	2.10	1	4.0	2000	2575
EE3.0H	700	3.00	1	4.5	3150	2245
EE3.2	720	3.20	1	4.5	3240	2180
EE3.6	830	3.60	1	4.5	3735	2075
EE4.0	750	4.00	1	4.5	3375	1900
EE4.6HF	940	4.60	14	4.5	4230	2700

- The above figures are nominal values for specifications contact your representative
- Absorption ratio = mass of water absorbed per unit area i.e. 100 grams of EE2.0H will absorb approx 400grams of water



## Instructions for correct use

When inserting into the filter press handle the filter sheets with care to eliminate distortion or abrasion. Never use a damaged filter sheet.

### Insertion of depth filter sheets

To ensure correct use place the smooth side of the filter sheet against the filtration plate (i.e downstream). The rough side of the filter sheet faces the liquid to be filtered (i.e upstream)

### Filter preparation

Prior to the first filtration it is recommended where possible to pre-rinse the closed filter with approximately 50 litres of water per m<sup>2</sup> at 1.25 times the flow rate. During pre-rinsing check for leakage, re-tighten to eliminate if necessary.

### Sterilisation

Carlson range of EE filter sheets may be sterilised with saturated steam or hot water. The pressed filter pack has to be loosened slightly to ensure that the steam entirely sterilised the system. Final pressure should only be applied to the filter package once the entire filter has cooled down.

#### Sterilisation with steam:

Steam quality:	Steam has to be free of foreign particles and impurities
Temperature:	max 134°C (saturated steam)
Duration	20 minutes

#### Sterilisation with hot water:

Water quality:	The water should be softened and be free of impurities
Temperature:	80-85°C
Duration:	20 minutes

### Sheet flushing

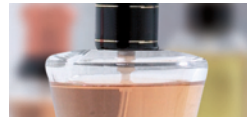
The Carlson range of EE filter sheets can be forward and back washed using softened water to extend the life and reduce the costs of filtration. This is, however, very much dependent upon the application and filtration conditions.

#### Regeneration procedure:

Cold rinsing:	in direction of filtration for approximately 5-10 minutes
Temperature	15-20°C
Hot rinsing;	forward or reverse direction of filtration for approximately 10 minutes
Temperature	60-80°C

### Safety and disposal

Used under the correct conditions the Carlson range of EE filter sheets have no known negative effects and can be disposed of through normal route, observing local and official regulations. Consult MSDS for further information.



## Storage

Store in a place which is dry, cool and free from strong odours

## Forms of supply

EE range of filter sheets are available in all customary sizes, hygienically shrink-wrapped and packed in cardboard boxes. Special formats are available on request.

## Remarks

All Carlson Filtration Ltd filter sheets are manufactured in accordance with BfR recommendation XXXV1/1 (regulations regarding paper and board designed for contact with foodstuffs) and EC Regulation No 1935/2004 (materials and articles intended to come into contact with food).

All our products are made accordingly to the rules of Quality Management System EN ISO 9001:2008

We provide information and advice to the best of our knowledge. This information cannot be binding in every case on account of the variety of applications, work methods and operating conditions. We, therefore, cannot assume liability for improper use.



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