

Filtration Products

**BECO, BECOPAD
and BECO CARBON**
depth filter sheets

EATON

Powering Business Worldwide

Depth filter sheets – the heart of many filtration solutions

Eaton is a leading supplier of complete depth filtration solutions and develops, manufactures and provides high-quality depth filtration media for food, beverage, fine chemical and pharmaceutical applications.

Depth filter sheets are used for coarse, clarifying and fine filtration and are particularly suitable for microbial reduction and removal, as well as upstream protection of membranes. The application of support sheets ranges from recovery of valuable material, such as protein precipitate, to support material for pre-coat filtration.

Finely fibrillated cellulose fibers are combined with filtration-active components to manufacture BECO® depth filter sheets. Whereas, BECOPAD® depth filter sheets are constructed of high-purity cellulose fibers without the addition of mineral components. BECO CARBON™ depth filter sheets with activated carbon round off the product range.

They are used as filter media in BECODISC® stacked disc cartridges and BECO® MiniCap® disposable filter units.

The product range of depth filter media also contains filtration systems in a range of designs and sizes.

Enclosed systems:

- BECO INTEGRA PLATE™ plate and frame filters
- BECO INTEGRA DISC™ stacked disc cartridge housings
- BECO INTEGRA SOLO™ single-sheet filters
- BECO INTEGRA LAB™ laboratory filters

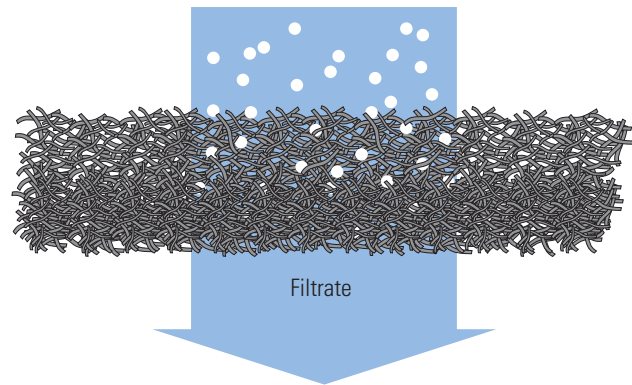
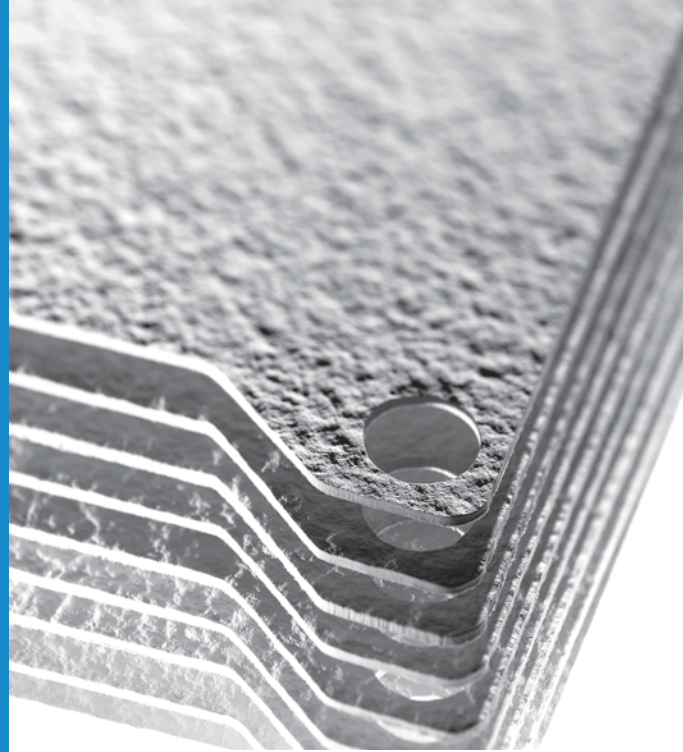
Classic systems:

- BECO COMPACT PLATE™ plate and frame filters

Eaton depth filter sheets meet national and international quality standards, such as:

- Regulation (EC) No 1935/2004 and German LFGB standard (Food, Commodity and Feed Act)
- FDA guidelines (Food and Drug Administration) from the USA

For further information, please refer to the Declaration of Conformity documents, technical data sheets and Validation Guides, especially for the pharmaceutical industry.



Principle of depth filtration



BECO, BECOPAD and BECO CARBON Depth Filter Sheet Ranges

Selection guide

Broad application spectrum



BECOPAD

Premium depth filter sheets made of cellulose, characterized by high-purity, strength and performance for excellent color and flavor fidelity.

Main applications:

Wine, beer, fruit juices, spirits, food, fine/specialty chemistry, biotechnology, pharmaceutical, cosmetics



BECO Standard

Depth filter sheets with excellent clarification performance for reliable removal from particles to microorganisms due to optimal pore structure and adsorption.

Main applications:

Wine, beer, fruit juices, spirits, food, fine/specialty chemistry, biotechnology, pharmaceutical, cosmetics



BECO CPS

Depth filter sheets with high dirt-holding capacity and burst strength for filtration of liquids with high viscosity or particle load.

Main applications:

Fine/specialty chemistry, biotechnology, pharmaceutical, cosmetics, food, fruit juices

Adsorption and decolorization



BECO CARBON

Immobilized activated carbon imparts high adsorption capacity to carbon depth filter sheets for the decolorization and removal of undesired by-products or for taste and odor correction.

Main applications:

Fine/specialty chemistry, biotechnology, pharmaceutical, cosmetics, fruit juices, spirits, food



BECO CP1

Depth filter sheets specifically manufactured with reduced thickness for polishing filtration of viscous liquids.

Main applications:

Fine/specialty chemistry, cosmetics

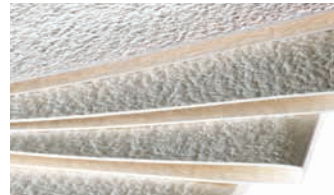


BECO SELECT A

Depth filter sheets specifically manufactured with reduced calcium and magnesium for prevention and removal of haze while preserving color and flavor.

Main applications:

Spirits, flavors and fragrances



BECO ENDURA

Reusable support sheet for pre-coat filtration. Excellent wet strength combined with an optimal filter surface texture for removal of filter cake with ease.

Main applications:

Beer, food, fine/specialty chemistry, cosmetics

A Validation Guide for BECO CARBON ACF 03 is available upon request.

Low endotoxin content suitable for pharmaceutical applications



BECOPAD P

Depth filter sheets composed of high-purity cellulose with low extractables, extremely low endotoxin content (<0.025 EU/ml) after rinsing with 6.6 gal/sqm (25 l/m²) WFI (Water for Injection) and up to 50% reduction of rinse volume.

Main applications:

Pharmaceutical, fine/specialty chemistry, biotechnology

A Validation Guide is available upon request.



BECO PR

Depth filter sheets with excellent clarification performance for reliable removal of particulate, microorganisms and retention of endotoxins due to optimal combination of depth filtration and adsorption. An endotoxin content of <0.125 EU/ml after rinsing with 13.2 gal/sqm (50 l/m²) WFI is achieved.

Main applications:

Pharmaceutical, fine/specialty chemistry, biotechnology

A Validation Guide is available upon request.



BECO PR ENDURA S

Support sheets specifically formulated for pre-coat filtration and valuable product recovery. The unusual surface qualities enable quick paste release in applications such as plasma fractionation. An endotoxin content of <0.08 EU/ml after rinsing with 13.2 gal/sqm (50 l/m²) WFI is achieved.

Main applications:

Pharmaceutical, fine/specialty chemistry, biotechnology

A Validation Guide is available upon request.

Technical data

Range	Type	Article number	Nominal retention rate	Thickness		Ash content	Bursting strength wet	Water throughput at		Endotoxin content	Activated carbon content
				µm	in (mm)			%	psi (kPa) ¹		
BECOPAD	BECOPAD 115 C ²	Q2C11	0.1– 0.2	0.16	(4.1)	<1	>21.8 (150)	0.6	(26)	-	-
	BECOPAD 120 ²	Q2112	0.1– 0.3	0.15	(3.9)	<1	>21.8 (150)	1.3	(54)	-	-
	BECOPAD 170 ²	Q2117	0.2– 0.4	0.15	(3.9)	<1	>21.8 (150)	1.9	(77)	-	-
	BECOPAD 220 ²	Q2122	0.3– 0.5	0.15	(3.9)	<1	>21.8 (150)	2.5	(100)	-	-
	BECOPAD 270 ²	Q2127	0.5– 0.7	0.15	(3.9)	<1	>21.8 (150)	3.3	(135)	-	-
	BECOPAD 350 ²	Q2135	0.7– 1.0	0.15	(3.9)	<1	>21.8 (150)	3.9	(160)	-	-
	BECOPAD 450 ²	Q2145	1.0– 2.0	0.15	(3.9)	<1	>21.8 (150)	7.4	(300)	-	-
	BECOPAD 550 ²	Q2155	2.0– 3.0	0.15	(3.9)	<1	>21.8 (150)	14.0	(570)	-	-
	BECOPAD 580 ²	Q2158	8.0–10.0	0.15	(3.9)	<1	>21.8 (150)	87.6	(3571)	-	-
BECO Standard	BECO Steril S 100	26950	0.1	0.15	(3.9)	58	>7.3 (50)	0.7	(30)	-	-
	BECO Steril S 80	26800	0.2	0.15	(3.9)	50	>11.6 (80)	1.1	(46)	-	-
	BECO Steril 60	25600	0.3	0.15	(3.8)	50	>7.3 (50)	1.5	(60)	-	-
	BECO Steril 40	25400	0.4	0.15	(3.8)	49	>7.3 (50)	1.7	(69)	-	-
	BECO SD 30	24300	0.5	0.15	(3.8)	50	>7.3 (50)	2.1	(84)	-	-
	BECO KDS 15	23150	0.6	0.15	(3.8)	50	>7.3 (50)	2.8	(115)	-	-
	BECO KDS 12	23120	0.8	0.15	(3.8)	50	>7.3 (50)	3.8	(155)	-	-
	BECO KD 10	22100	1.0	0.15	(3.8)	50	>7.3 (50)	4.5	(185)	-	-
	BECO KD 7	22070	1.5	0.15	(3.8)	50	>7.3 (50)	5.5	(225)	-	-
	BECO KD 5	22050	2.0	0.15	(3.8)	50	>7.3 (50)	6.6	(270)	-	-
	BECO KD 3	22030	2.5	0.15	(3.8)	50	>5.8 (40)	10.4	(425)	-	-
	BECO K2	21020	3.0	0.15	(3.8)	46	>7.3 (50)	38.0	(1550)	-	-
	BECO K1	21010	4.0	0.15	(3.8)	42	>8.7 (60)	46.6	(1900)	-	-
BECO CPS	BECO CP07S	27108	15.0	0.14	(3.6)	35	>16.0 (110)	105.3	(4290)	-	-
	BECO CP03S	27123	20.0	0.15	(3.7)	35	>13.1 (90)	175.2	(7140)	-	-
	BECO CP02S	27122	25.0	0.13	(3.3)	17	>13.1 (90)	233.6	(9520)	-	-
	BECO CP01S	27121	30.0	0.18	(4.6)	16	>14.5 (100)	306.8	(12500)	-	-
	BECO CP2KS ²	27031	27.0	0.11	(2.9)	<1	>11.6 (80)	239.5	(9760)	-	-
	BECO CP1KS ²	27021	40.0	0.17	(4.3)	<1	>21.8 (150)	555.1	(22620)	-	-
BECO CPT	BECO CP1	27110	3.0	0.1	(2.6)	48	>14.5 (100)	26.3	(1070)	-	-
BECO SELECT A	BECO SELECT™ A 20	27620	0.8	0.17	(4.4)	43	>5.8 (40)	3.9	(160)	-	-
	BECO SELECT A 40	27640	2.5	0.17	(4.4)	43	>5.8 (40)	7.4	(300)	-	-
BECO ENDURA	BECO ENDURA™ ²	29200	-	0.13	(3.4)	<1	>101.5 (700)	105.3	(4290)	-	-
BECO CARBON	BECO CARBON ACF 07.10 ⁵	19607	-	0.15	(3.8)	15	>11.6 (80)	34.7	(1415)	-	420
	BECO CARBON ACF 02	19602	-	0.21	(5.3)	2.5	>11.6 (80)	6.75	(275)	< 0.125 ⁴	1000
	BECO CARBON ACF 03	19603	-	0.20	(5.1)	5	>11.6 (80)	7.36	(300)	< 0.125 ⁴	1000
BECOPAD P	BECOPAD P 170 ²	Q1117	0.2– 0.4	0.15	(3.9)	<1	>21.8 (150)	1.9	(77)	<0.025 ³	-
	BECOPAD P 270 ²	Q1127	0.5– 0.7	0.15	(3.9)	<1	>21.8 (150)	3.3	(135)	<0.025 ³	-
	BECOPAD P 350 ²	Q1135	0.7– 1.0	0.15	(3.9)	<1	>21.8 (150)	3.9	(160)	<0.025 ³	-
	BECOPAD P 550 ²	Q1155	2.0– 3.0	0.15	(3.9)	<1	>21.8 (150)	14.0	(570)	<0.025 ³	-
	BECOPAD P 580 ²	Q1158	8.0–10.0	0.15	(3.9)	<1	>21.8 (150)	87.6	(3571)	<0.025 ³	-
BECO PR	BECO PR Steril S100	27295	0.1	0.15	(3.9)	58	>7.3 (50)	0.7	(30)	<0.125 ⁴	-
	BECO PR Steril S 80	27280	0.2	0.15	(3.9)	50	>11.6 (80)	1.1	(46)	<0.125 ⁴	-
	BECO PR Steril 40	27240	0.4	0.15	(3.9)	49	>7.3 (50)	1.5	(61)	<0.125 ⁴	-
	BECO PR 12	27212	0.8	0.15	(3.9)	50	>18.9 (130)	4.3	(175)	<0.125 ⁴	-
	BECO PR 5	27205	2.0	0.15	(3.9)	50	>8.7 (60)	8.1	(330)	<0.125 ⁴	-
	BECO PR 1	27200	4.0	0.17	(4.3)	48	>6.5 (45)	58.4	(2381)	<0.125 ⁴	-
BECO PR ENDURA S	BECO PR ENDURA S ²	29450	-	0.06	(1.5)	<1	>58.0 (400)	18.9	(770)	<0.08 ⁴	-

¹ 100 kPa = 1 bar | ² Without the addition of mineral components | ³ Determination after rinsing with 6.6 gal/sqm (25 l/m²) WFI (Water for Injection) | ⁴ Determination after rinsing with 13.2 gal/sqm (50 l/m²) WFI | ⁵ BECO CARBON ACF 07.10S with protective paper see Technical Data Sheet



Retention ranges and filtration tasks

BECO and BECOPAD depth filter sheets											BECO support sheets		BECO CARBON activated carbon depth filter sheets		
Nominal retention range in µm													Activated carbon pore size		
0.1	0.6	2.5	4.0	4.5	5.0	10.0	15.0	30.0	40.0	80.0			Micro	Meso	Macro
BECOPAD															
Standard															
CPS															
CP1													ACF 07.10		
SELECT A															
BECOPAD P											ENDURA				
PR											Endotoxin content < 0.08 EU/ml		ACF 02		
Endotoxin content < 0.125 EU/ml											Endotoxin content < 0.025 EU/ml		ACF 03		
Microbial reduction and removal											PR ENDURA S		Endotoxin content < 0.125 EU/ml		
Coarse, clarifying and fine filtration											Pre-coat filtration		Adsorptive filtration		

Ordering information

BECOPAD depth filter sheets

Note for orders:

Our 8-digit order no. consists of two parts:

- the 5-digit article no. and
- the 3-digit format no.

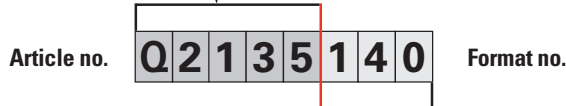
Examples for the format no. code:

Format 7.9 x 7.9 in (200 x 200 mm) = format no. 120
 Format 15.7 x 15.7 in (400 x 400 mm) = format no. 140
 Format 23.6 x 24.2 in (600 x 615 mm) = format no. 160

Example for order no.:

BECOPAD 350 in format 15.7 x 15.7 in (400 x 400 mm) = 140

Type	Article no.	Nominal retention range µm
BECOPAD 350	Q2135	0.7–1.0



BECO and BECO CARBON depth filter sheets

Note for orders:

Our 8-digit order no. consists of two parts:

- the 5-digit article no. and
- the 3-digit format no.

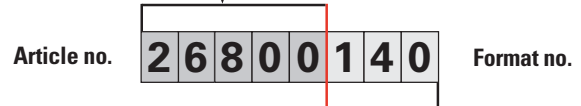
Examples for the format no. code:

Format 7.9 x 7.9 in (200 x 200 mm) = format no. 120
 Format 15.7 x 15.7 in (400 x 400 mm) = format no. 140
 Format 23.6 x 24.2 in (600 x 615 mm) = format no. 160

Example for order no.:

BECO Steril S 80 in format 15.7 x 15.7 in (400 x 400 mm) = 140

Type	Article no.	Nominal retention rate µm
BECO Steril S 80	26800	0.2



All common square or round filter sizes are available for delivery. Special formats are available upon request.

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