

THE FILTER MAT A3/300S



THE FINE FILTER MAT FOR REFINED APPLICATIONS

FILTER TYPE	FILTER CLASS	NOMINAL MEDIA VELOCITY [m/s]	TEST STANDARD
A3/300S	M5	0.25	EN 779



The application

The A3/300S filter mat is a popular option for high quality final filtration in ventilation equipment and systems, and as a prefilter in multi-stage air intake systems.

The media and its characteristic features

- The mat is made of **high performance nonwoven produced inhouse** from polyester fibers with thermal bonding. These fibers are **elastic and break-resistant**, so that no fiber fragments are passed into the clean air, and the original nonwoven structure is retained over the entire operational life.
- The filter medium is **progressive in structure**, with layers of differing fiber diameters being arranged behind each other so as to ensure that the

density of the fiber layers increases towards the clean air side. This optimizes the defined filter performance and the dust holding capacity, resulting in **longer useful lifetime for the filter concerned**.

- **Fire behaviour:** Viledon® filter media satisfy the stringent requirements of Fire Class F1 according to DIN 53438 and are thus **self-extinguishing**.
- **Certified quality:** The A3/300S filter mat has been **tested according to EN 779** and is manufactured under our certified quality management system to ISO 9001. This offers all users the reassuring certainty that all filters will be supplied in consistently high standardized quality, documented by marking the filter mat with brand name, type designation, and filter class.

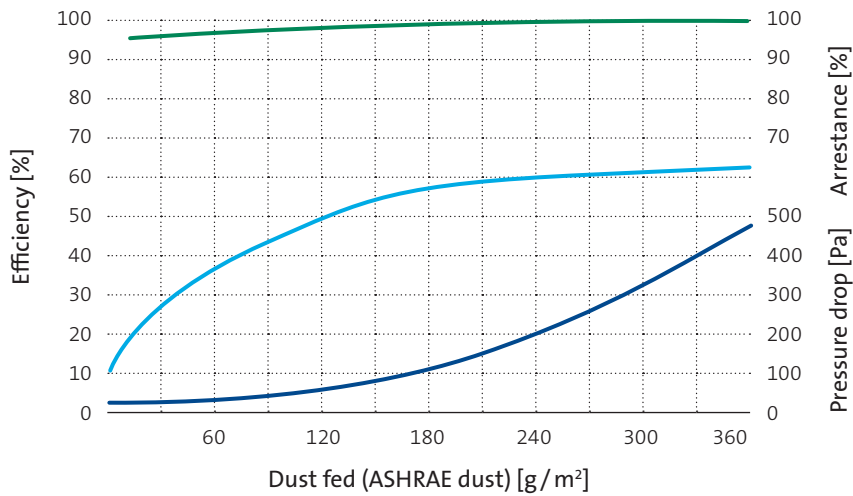
The special features of the A3/300S

- The specially **smoothed surface** of the clean-air-side increases the rigidity of the filter mat, rendering it correspondingly sturdy and installation-friendly.
- Thanks to its very good arrestance performance, the A3/300S filter mat is a **versatile product for use in all fields where high quality** filtration of fine dust is demanded for protecting staff and machinery.

GEOMETRIES AVAILABLE		A3/300S
Weight approx.	g/m ²	300
Thickness approx.	mm	20
Thermal stability	°C	up to 100
Moisture-resistance (rel. hum.)	%	up to 100
Supplied as rolls, useful width/length	mm/m	2,000/20
Supplied as cut pieces/rolls	mm	to customer's specification

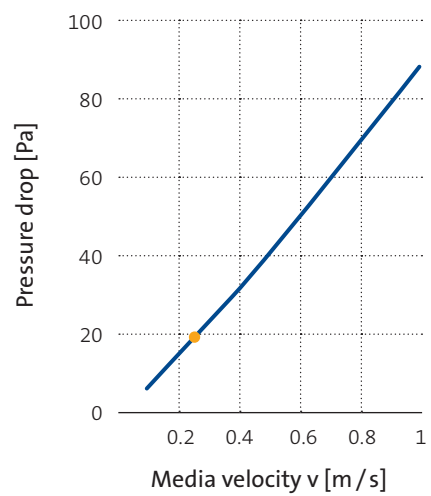
TECHNICAL FILTER TEST DATA TO EN 779

Arrestance, efficiency and pressure drop plotted against dust feed at nominal media velocity



— Arrestance — Efficiency — Pressure drop

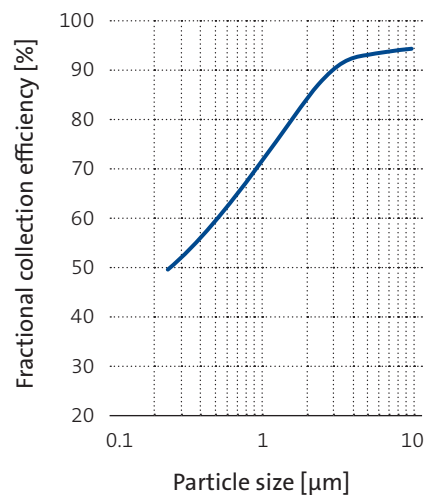
Pressure drop curve plotted against the media velocity



— A3/300S ● Nominal media velocity

KEY DATA			A3/300S
Examination surface		m ²	1
Nominal media velocity	●	m/s	0.25
Initial pressure drop		Pa	20
Final pressure drop*		Pa	450
Average efficiency	E _a	%	46
Average arrestance	A _a	%	97
Dust holding capacity		g/m ²	360

Average, weighted fractional efficiency for 290 Pa final pressure drop plotted against the particle size



Test conditions

Media velocity: 0.25 m/s
 Dust fed: ASHRAE test dust/approx. 70 mg/m³, Test aerosol: DEHS
 Measuring instrument: scattered-light laser particle counter

* For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the final pressure drop stated. Exceeding those limits may also be possible in certain applications.

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THE LH_R/260 ROLL FILTER



FOR TRADITIONAL COARSE DUST FILTRATION

FILTER TYPE	FILTER CLASS	NOMINAL MEDIA VELOCITY [m/s]	TEST STANDARD
LH_R/260	G3	2.5	EN 779



The filter

The LH_R/260 filter mat is used for filtration in roll filter equipment.

The medium and its characteristic features

- The mat is made of high performance nonwoven produced inhouse from polyester fibers with thermal bonding, i. e. without bonding agents.
- The filter medium is progressive in structure, with layers of differing fiber diameters being arranged behind each other so as to ensure that the density of the fiber layers increases towards the clean-air side. This optimizes the defined filter performance and the dust holding capacity, resulting in longer useful lifetime for the filter concerned.
- Fire behaviour: Viledon® filter media satisfy the stringent requirements of Fire Class F1 according to DIN 53438 and are self-extinguishing.

The special features of the LH_R/260

- The filter mat's clean air side is reinforced by a support fabric to ensure even and reliable advance of the filter material concerned.
- LH_R/260 is the filter solution for traditional coarse dust arrestance in roll filter systems.

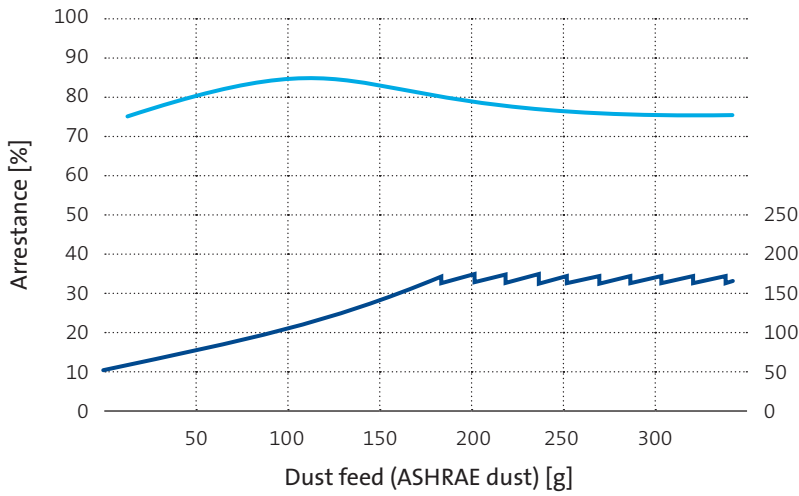
Our recommendation

From long years of experience, we know that roll filter systems fitted with LH_R/260 alone are not yet the optimum in air filtration. Cost efficiency and operational dependability, in particular, can be significantly improved by using alternative Viledon® systems. Please contact our experts, who will be pleased to advise you free of charge.

GEOMETRIES AVAILABLE		LH_R/260
Weight, approx.	g/m ²	250
Thickness, approx.	mm	8
Thermal stability	°C	up to 100
Moisture-resistance (rel. hum.)	%	up to 100
Supplied as: ready to install rolls on cardboard sleeves with 35 mm inside diameter or with add. D metal reels	Roll length (m)	20
	Roll width (mm)	810 1,110 1,410 1,710 2,010 D-Spule 1,250
Supplied as: ready to install rolls on cardboard sleeves with 55 mm inside diameter or on C metal reels	Roll length (m)	20
	Roll width (mm)	838 1,143 1,448 1,753 2,058

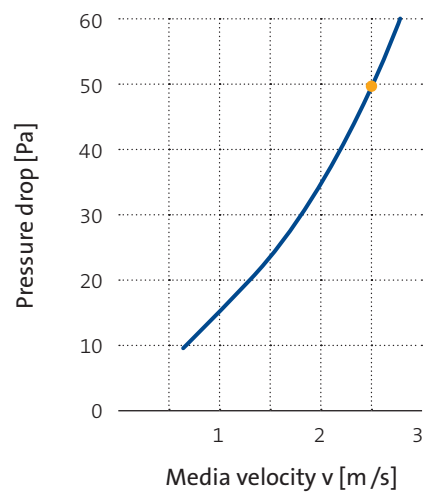
TECHNICAL FILTER TEST DATA TO EN 779

Arrestance and pressure drop plotted against dust feed at nominal media velocity



— Arrestance — Pressure drop

Pressure drop curve plotted against the media velocity



— LH_R/260 ● Nominal media velocity

KEY DATA			LH_R/260
Examination surface		m ²	0.32
Nominal media velocity	●	m/s	2.5
Initial pressure drop		Pa	50
Final pressure drop*		Pa	250
Average efficiency	E_a	%	80
Average arrestance	A_a	%	< 20
Dust holding capacity approx.		g/m ²	400

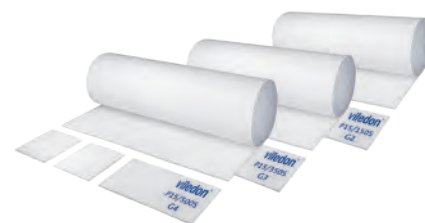
* For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the final pressure drop stated. It can also be exceeded in certain applications.

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FILTER MATS OF THE P 15 SERIES

THE ULTRA-DURABLE FILTER MATS

FILTER TYPE	FILTER CLASS	NOMINAL MEDIA VELOCITY [m/s]	TEST STANDARD
P 15/150 S	G2	2	EN 779
P 15/350 S	G3	1.5	EN 779
P 15/500 S	G4	1	EN 779



The application

The P 15 series comprises the following familiar and yet continually enhanced Viledon® filter mats

- P 15/150 S
- P 15/350 S
- P 15/500 S

All the types in this series are tough, high performance products, suitable for filtration in all kinds of ventilation systems.

The media and their characteristic features

- The mats are made of **high performance nonwovens produced inhouse from elastic, break-resistant polyolefine fibers with thermal bonding.**
- P 15/350 S and P 15/500 S are **progressive in structure**, with layers being arranged behind each other so as

to ensure that the density of the fiber layers increases towards the clean air side. This optimizes the defined filter performance and the dust holding capacity, resulting in **longer useful lifetime for the filter** concerned.

- **Fire behaviour:** Viledon® filter media satisfy the stringent requirements of Fire Class F1 according to DIN 53438 and are thus **self-extinguishing.**
- **Certified quality:** P 15 filter mats have been **tested according to EN 779** and are manufactured under our certified quality management system to ISO 9001. This offers all users the reassuring certainty that all filters will be supplied in consistently high standardized quality, documented by marking the filter mat with brand name, type designation and filter class.

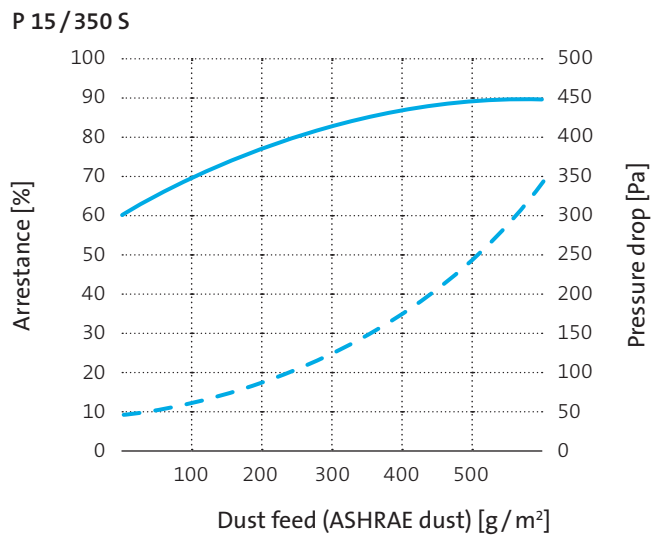
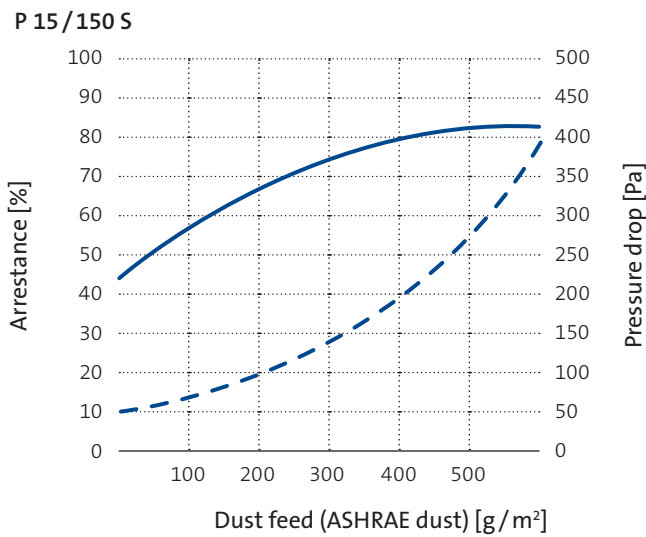
The special features of the P 15 series

- High arrestance throughout their entire useful lifetime, thus providing **maximized operational reliability.**
- The **high mechanical strength of the material** used offers **good dimensional stability** throughout the operational lifetime, even when handling large air volumes, thus ensuring dependable operation of the filter system concerned.
- Thanks to the polyolefine fibers used in the medium, P 15 filter mats are **widely resistant to chemicals** like solvents, acids and alkalis. They must be protected against continuous UV radiation.
- The filter mats are **cleanable by careful washing, beating or spraying.** Even after washing, the filter mats remain dimensionally stable, thus retaining their technical filtering properties.
- Our environment-friendly filter series for users interested in **avoiding waste and cutting their filter costs.**

GEOMETRIES AVAILABLE		P 15/150 S	P 15/350 S	P 15/500 S
Weight, approx.	g/m ²	100	200	350
Thickness, approx.	mm	8	14	20
Thermal stability	°C	up to 100		
Moisture-resistance (rel. hum.)	%	up to 100		
Supplied as rolls, useful width / length	mm / m	2,000 / 40	2,000 / 30	2,000 / 20
Supplied as cut pieces / rolls	mm	to customer's specification		

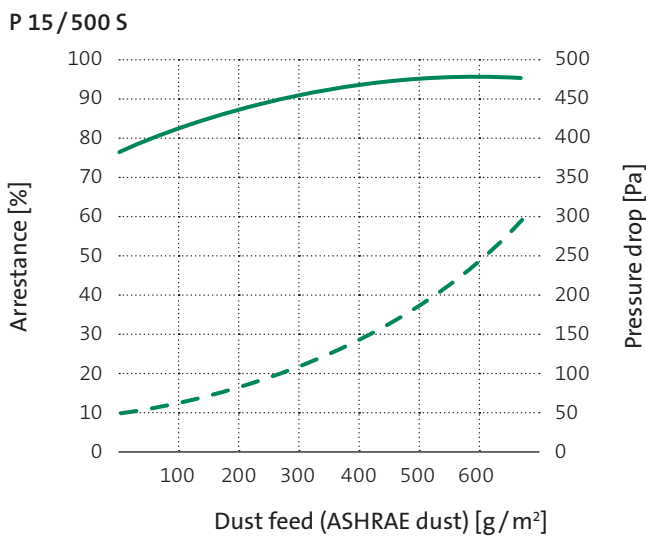
TECHNICAL FILTER TEST DATA TO EN 779

Arrestance and pressure drop plotted against dust feed at nominal media velocity

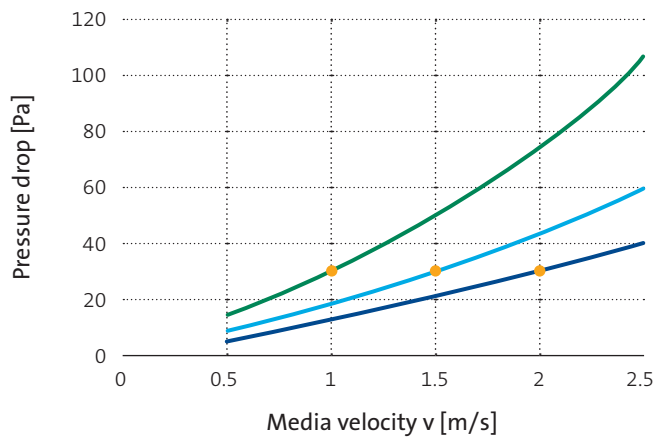


— Arrestance - - - Pressure drop

— Arrestance - - - Pressure drop



Pressure drop curves plotted against the media velocity



— Arrestance - - - Pressure drop

— P 15/150 S — P 15/500 S
— P 15/350 S ● Nominal media velocity

KEY DATA		P 15/150 S	P 15/350 S	P 15/500 S
Examination surface	m ²		0.37	
Nominal media velocity	● m/s	2	1.5	1
Initial pressure drop	Pa		30	
Initial efficiency	E _i %		< 20	
Average arrestance	A _a %	75	84	94
Final pressure drop*	Pa		250	
Dust holding capacity	g/m ²		600	

* For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the final pressure drop stated. It can also be exceeded in certain applications.

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THE PA DUO: THE PROFESSIONAL

FILTER MATS FOR GLEAMING PAINTWORK

FILTER TYPE	FILTER CLASS	NOMINAL MEDIA VELOCITY [m/s]	TEST STANDARD	MIGRATION TEST CLASS
PA/500-10	M5	0.25	EN 779	S0
PA/560 G-10	M5	0.25	EN 779	S0



The application

In surface treatment applications, the

- PA/500-10
- PA/560 G-10

filter mats are acknowledged as standard equipment. The main field of application for these fine filters is final intake air filtration in paint spray systems and booths.

The media and their characteristic features

- The mats are made of high performance nonwovens produced in-house from elastic, break-resistant polyester fibers. These nonwovens are thermally bonded and specially smoothed on the clean air side, in order to assure excellent fiber bonding. In addition, the fibers are specially processed to provide an actively adhesive surface.
- The filter media are progressive in structure, with layers of differing fiber diameters being arranged behind

each other so as to ensure that the density of the fiber layers increases towards the clean air side. This optimizes the defined filter performance and the dust holding capacity, resulting in longer useful lifetime for the filter concerned.

- **Fire behaviour:** Viledon® filter media satisfy the stringent requirements of Fire class F1 according to DIN 53438 and are thus self-extinguishing.
- **Certified quality:** PA filter mats have been impartially type-tested according to EN 779 and are manufactured under our certified quality management system to ISO 9001. This offers all users the reassuring certainty that all filters will be supplied in consistently high standardized quality, documented by marking the filter mat with brand name, type designation and filter class, as well as DIN mark of conformity plus model validation number for PA/560 G-10.

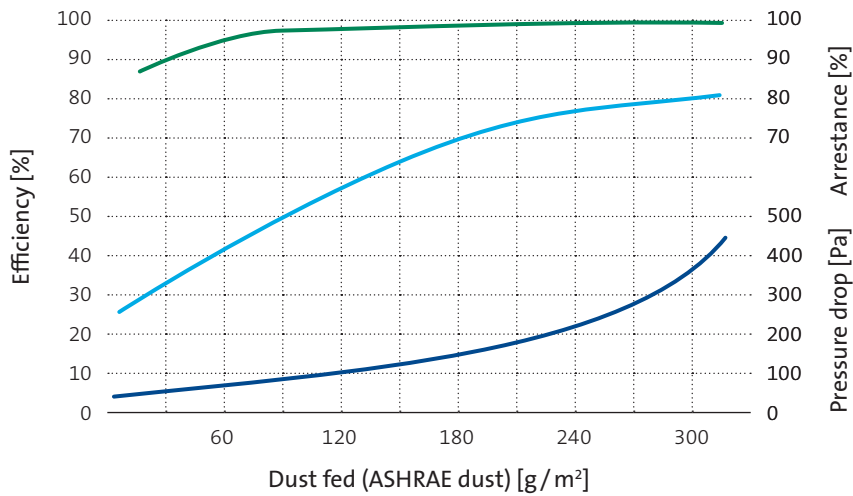
The special features of the PA duo

- Both filter mats ensure practically 100% arrestance of particles >10 µm which might cause visually perceptible surface imperfections. This means maximized protection against paintwork defects for the user.
- The actively adhesive surface of each individual fiber of the filter media ensures permanent retention of particles already collected throughout the entire operating lifetime.
- PA filter mats qualify for the highest "S0" class in the Viledon® migration test acknowledged throughout the market. For further information, please consult our special brochure entitled "Surface Treatment Automotive".
- PA/560G-10 additionally features a reinforcing scrim on the clean air side. This enhances the filter mat's stability and reduces the risk of damage to the clean air side during installation.
- PA filter mats are resistant to solvent vapours and contain no silicone.

GEOMETRIES AVAILABLE		PA/500-10	PA/560 G-10
Weight approx.	g/m ²	500	580
Thickness approx.	mm	25	
Thermal stability	°C	up to 100 briefly up to 120	
Moisture-resistance (rel. hum.)	%	up to 100	
Supplied as rolls, useful width/length	mm/m	2,000/20	1,600/20 1,600/22 2,000/20 2,000/22
Supplied as cut pieces / rolls	mm	to customer's specification	

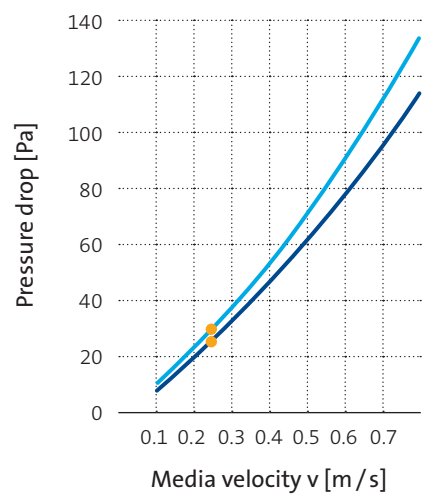
TECHNICAL FILTER TEST DATA TO EN 779

Arrestance, efficiency and pressure drop plotted against dust feed at nominal media velocity



— Arrestance — Efficiency — Pressure drop

Pressure drop plotted against the media velocity

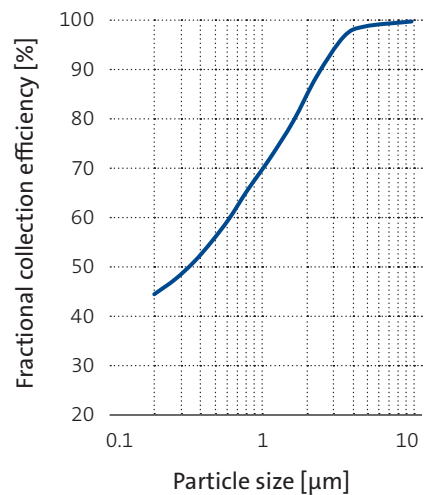


— PA/500-10 — PA/560 G-10
● Nominal media velocity

KEY DATA			PA / 500-10	PA / 560 G-10
Examination surface		m ²	1	
Nominal media velocity	●	m/s	0.25	0.25
Initial pressure drop		Pa	25	30
Final pressure drop*		Pa	450	
Average efficiency	E _a	%	50	55
Average arrestance	A _a	%	98	99
Dust holding capacity		g/m ²	300	300

* For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the final pressure drop stated.

Average, weighted fractional arrestance for 350 Pa final pressure drop plotted against the particle size



Test conditions

Media velocity: 0.25 m/s
Dust fed: ASHRAE test dust/approx. 70 mg/m³, Test aerosol: DEHS
Measuring instrument: scattered-light particle counter

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FILTER MAT PA-5 MICRON



IN A CLASS OF ITS OWN
IN CEILING FILTRATION

FILTER TYPE	FILTER CLASS	NOMINAL MEDIA VELOCITY [m/s]	TEST STANDARD	MIGRATION TEST CLASS
PA-5 micron	M6	0.25	EN 779	S0



The application

The main field of application for the PA-5 micron filter mat is final intake air filtration in paint-spray processes involving particularly stringent requirements for air purity. As synthetic ceiling filter mat in Filter Class M6, it ensures practically 100% arrestance of particles > 5 µm. The PA-5 micron thus meets even the toughest of quality stipulations in surface treatment technology.

The medium and its characteristic features

- The mat is made of high performance nonwoven produced in-house from elastic, non-breaking polyester fibers. This nonwoven is thermally bonded and specially smoothed on the clean air side, in order to achieve excellent fiber bonding. So as to ensure permanent retention of particles already collected throughout the entire operating lifetime, the fibers are in addition specially processed to give each individual fiber an actively adhesive surface.

- The filter medium is **progressive in structure**, with layers of differing fiber diameters being arranged behind each other so as to ensure that the density of the fiber layers increases towards the clean air side. This optimizes the filter performance and the dust holding capacity, resulting in **longer useful lifetime for the filter** concerned.
- Fire behaviour:** Viledon® filter media satisfy the stringent requirements of Fire Class F1 according to DIN 53438 and are **self-extinguishing**.
- Certified quality:** PA-5 micron has been **impartially type-tested to EN 779**. This offers all users the reassuring certainty that all filters will be supplied in consistently high standardized quality, documented by marking the filter mat with brand name, type designation, filter class, and DIN mark of conformity plus model validation number.

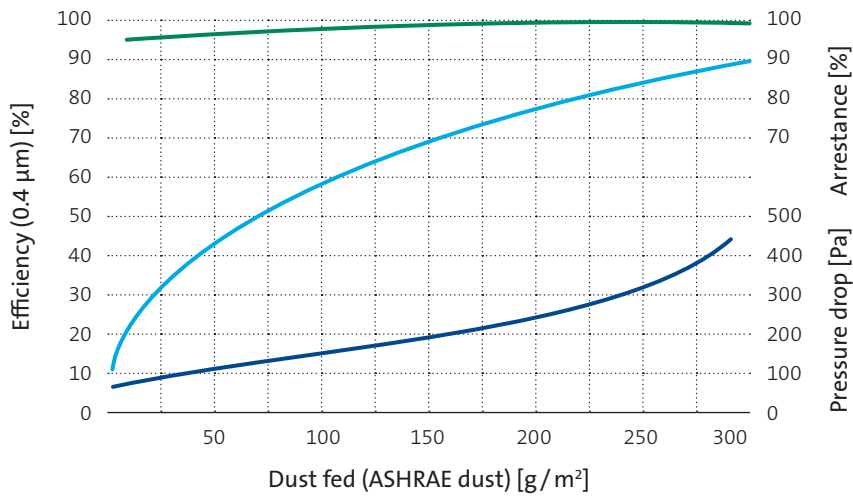
The special features of the PA-5 micron

- With the PA-5 micron, **not only particles measuring > 10 µm, but even those measuring > 5 µm are filtered out almost entirely**. Thus the PA-5 micron ensures **outstanding production dependability for the user in all sophisticated paint-spray processes**.
- Due to the adhesive fiber surface, the PA-5 micron is able to **permanently bond more than 3 kg/m² of freeflowing Aloxite dust**.
- PA-5 exceeds the highest „S0“ class in the Viledon® migration test acknowledged throughout the market. For further information on this test, please consult our special „Surface Treatment“ brochure.
- The **reinforcing scrim on the clean air side** enhances the filter mat's stability and minimizes the risk of damage to the clean air side during installation.
- PA-5 micron is **resistant to solvent vapours** and contains **no silicone**.

GEOMETRIES AVAILABLE		PA-5 MICRON
Weight approx.	g/m²	650
Thickness approx.	mm	25
Thermal stability	°C	up to 100, briefly up to 120
Moisture-resistance (rel. hum.)	%	bis 100
Supplied as rolls, useful width / length	mm/m	2,000 / 20
Supplied as cut pieces / rolls	mm	to customer's specification

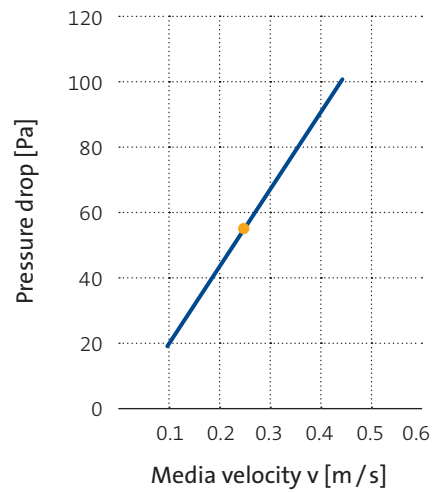
TECHNICAL FILTER TEST DATA TO EN 779

Arrestance, efficiency and pressure drop plotted against dust feed at nominal media velocity



— Efficiency — Pressure drop — Arrestance

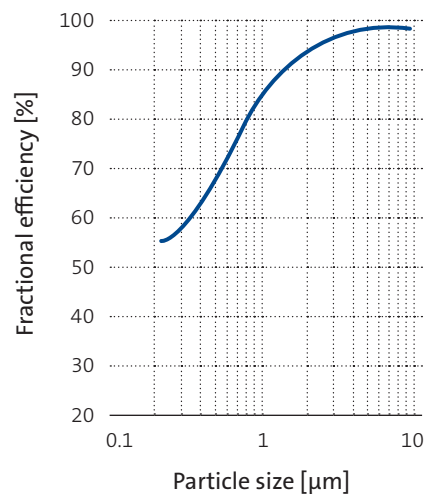
Pressure drop curve plotted against the media velocity



— PA-5 micron
● Nominal media velocity

KEY DATA			PA-5 MICRON
Examination surface		m ²	1
Nominal media velocity	●	m/s	0.25
Initial pressure drop		Pa	55
Final pressure drop*		Pa	250–300
Average efficiency	E _a	%	70
Average arrestance	A _a	%	99
Dust holding capacity		g/m ²	300

Average, weighted fractional efficiency for 300 Pa final pressure drop plotted against the particle size



Test conditions

Media velocity: 0.25 m/s
Dust fed: ASHRAE test dust/approx. 70 mg/m³, Test aerosol: DEHS
Measuring instrument: scattered-light laser particle counter

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FILTER MATS OF THE PSB SERIES

THE CLASSIC FILTER MATS

FILTER TYPE	FILTER CLASS	NOMINAL MEDIA VELOCITY [m/s]	TEST STANDARD
PSB/145 S	G2	2	EN 779
PSB/275 S	G3	1.5	EN 779
PSB/290 S	G4	1	EN 779



The application

The PSB series comprises the following filter mats

- PSB/145 S
- PSB/275 S
- PSB/290 S

PSB filter mats are used for intake air filtration in all kinds of ventilation systems, particularly for coarse dust arrestance and as prefilter stages.

The media and their characteristic features

- The mats are made of **high performance nonwovens produced inhouse from elastic, break-resistant polyester fibers with thermal bonding.**
- PSB/275 S and PSB/290 S are **progressive** in structure, with layers being arranged behind each other so as

to ensure that the density of the fiber layers increases towards the clean air side. This optimizes the defined filter performance and the dust holding capacity, resulting in **longer useful lifetime for the filter concerned.**

- **Fire behaviour:** Viledon® filter media satisfy the stringent requirements of Fire Class F1 according to DIN 53438 and are thus **self-extinguishing.**
- **Certified quality:** PSB filter mats have been **tested according to EN 779** and are manufactured under our certified quality management system to ISO 9001. This offers all users the reassuring certainty that all filters will be supplied in consistently high standardized quality, documented by marking the filter mat with brand name, type designation and filter class.

The special features of the PSB series

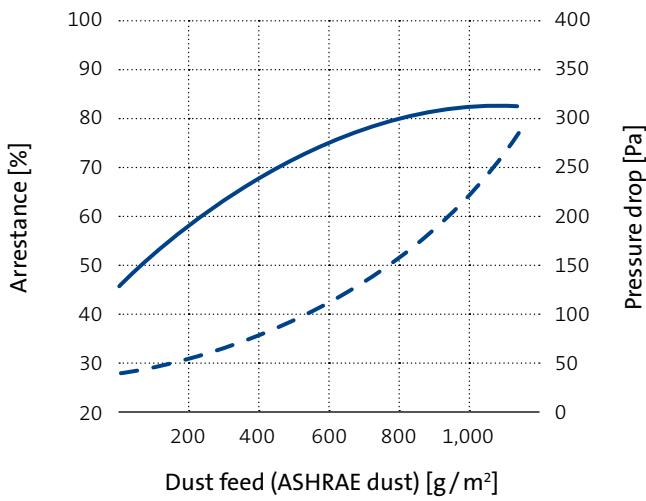
- Due to their **high dust holding capacity** and their **resultant long useful lifetimes**, PSB filter mats are **particularly cost-efficient.**
- All types of this series are especially effective in applications requiring **stable arrestance in spite of high dust loading and high air flow rates.**
- When used in exhaust air filtration, the advantage of the PSB series is that **arrestance and dust holding capacity** are very well harmonized.

GEOMETRIES AVAILABLE		PSB/145 S	PSB/275 S	PSB/290 S
Weight approx.	g/m ²	120	180	300
Thickness, approx.	mm	10	15	20
Thermal stability	°C	up to 100		
Moisture-resistance (rel. hum.)	%	up to 100		
Supplied as rolls, useful width/length	mm/m	2,000/40	2,000/30	2,000/20
Supplied as cut pieces/rolls	mm	to customer's specification		

TECHNICAL FILTER TEST DATA TO EN 779

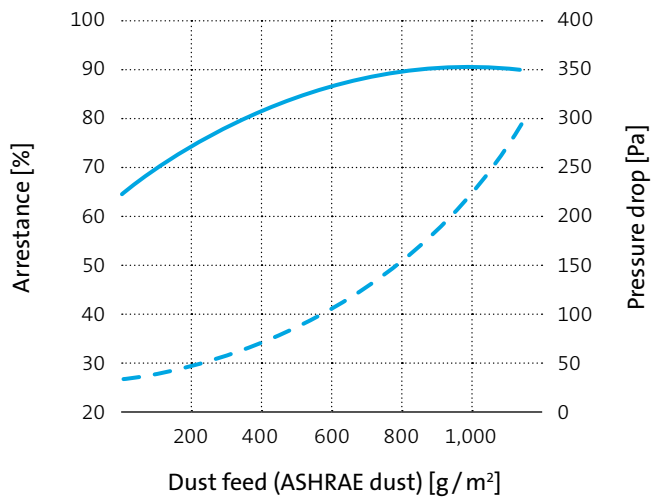
Arrestance and pressure drop plotted against dust feed at nominal media velocity

PSB / 145 S



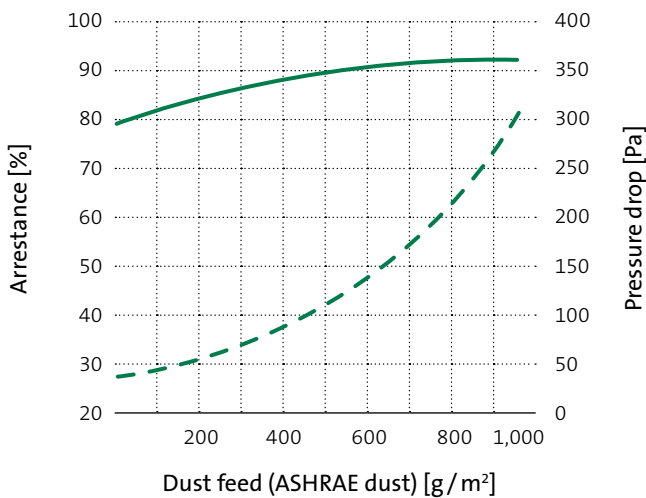
— Arrestance - - - Pressure drop

PSB / 275 S



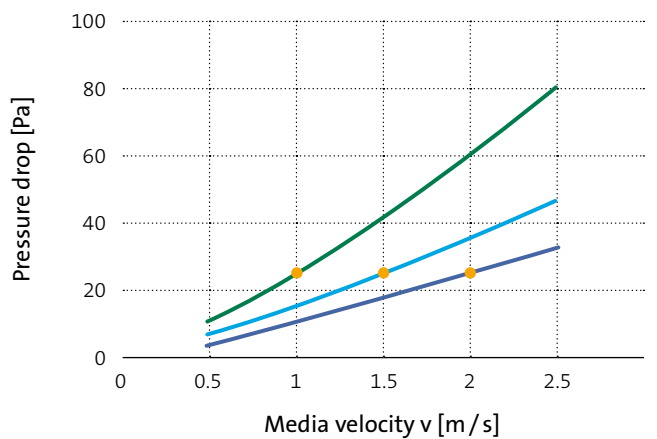
— Arrestance - - - Pressure drop

PSB / 290 S



— Arrestance - - - Pressure drop

Pressure drop curves plotted against the media velocity



— PSB / 145 S — PSB / 290 S
— PSB / 275 S ● Nominal media velocity

KEY DATA		PSB / 145 S	PSB / 275 S	PSB / 290 S
Examination surface	m ²		0.37	
Nominal media velocity	● m/s	2	1.5	1
Initial pressure drop	Pa		22	
Average efficiency	E _a %	< 20		
Initial arrestance	A _i %	70	83	91
Final pressure drop*	Pa		250	
Dust holding capacity	g / m ²	600	700	750

* For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the final pressure drop stated. It can also be exceeded in certain applications.

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