

# Viledon Filter Mats: Clean Air by the Roll



viledon®

Product  
Overview



Freudenberg

# Viledon: The brand, its philosophy, its products

viledon®



*Expert certification  
is not only  
reassuring, ...*



*... it minimizes your  
risks as well!*

## **Where all Viledon filter mats excel!**

Freudenberg, the world's largest manufacturer of nonwovens, and an acknowledged specialist in questions of air filtration, uses only high performance nonwovens produced inhouse for Viledon filter mats, made of synthetic-organic fibers like polyester or polyolefine.

Besides the technical filtration data like ar-  
restance, pressure drop, and dust holding capac-  
ity, there are additional criteria which character-  
ize a filter mat's overall performance:

Viledon filter mats, for example, are moisture-  
resistant up to 100 % relative humidity, and ther-  
mally stable up to 100 °C. For use in dryer sys-  
tems, the PA filter mats can even withstand 120°C  
for short periods.

Viledon filter media satisfy the stringent re-  
quirements of Fire Class F1 to DIN 53 438 and  
are self-extinguishing.

## **The "inner" values of our filter media**

In order to achieve maximized ar-  
restance performance combined with ultra-favorable pressure  
drop characteristics, Viledon filter mats are pro-  
gressive in structure, with layers of differing fiber  
diameters being arranged behind each other so  
as to ensure that the density of the fiber layers in-  
creases towards the clean-air side. This optimizes  
the defined filter performance and the dust hold-

ing capacity, resulting in long useful lifetime for  
the filter concerned.

## **Quality is paramount**

At Freudenberg, quality is an across-the-board  
commitment, which starts off with full compre-  
hension of the customer's requirements, before  
translating these into products, processes and  
services.

A modern quality management system to ISO  
9001 monitors all operations, from the very be-  
ginning of development work and application-  
engineering consultancy all the way through to  
delivery of the finished product.

The consistent quality of Viledon filter mats  
has been tested by an independent institute in  
accordance with EN 779, and documented by  
imprinting the filter mats with brand name, type  
designation and filter class.

The independently type-tested Viledon filter  
mats additionally bear the DIN mark of conform-  
ity, plus the model validation number involved.

### **Viledon works. Depend on it.**

When we recommend a particular solution for your application, our advice is backed up by decades of experience and in-depth know-how concerning dusts, testing methodology, standards and specifications, and a whole lot more. Experience and know-how geared to making sure that both staff and machinery are effectively protected against air pollutants.

Dependability is paramount and essential for trouble free operation of filter systems or filter units. With Viledon filter mats, dependability means a filter optimally tailored to the requirements involved, so as to provide the desired arrestance performance over the filter's entire lifetime.

Dependability starts with the fibers used. Only non-breakable fibers are used for Viledon filter mats, thus preserving the original nonwoven structure throughout the entire period of operation.

Applications with high air flow rates demand high mechanical strength in the filter material. For your own particular operation, we recommend the filter mat which will offer you maximized dimensional stability for ultra-reliable operation.

### **Cost efficiency that's worth affording**

Dependability and cost efficiency – two aspects which are inextricably linked. After all, a filter which is not dependable in its performance, which cannot cope properly with the operating conditions involved, will inevitably increase your maintenance and filter replacement costs. A filter which has been incorrectly dimensioned and designed for the clean-air quality required, or for the intake air conditions encountered, may consume too much energy, or fail to reach its specified useful lifetime.

One of the key factors in the cost efficiency of Viledon filter mats is the progressive structure of the filter media involved. This is complemented by selection of the right filter mat for each application, optimally matched to the filtration requirements encountered. We will be pleased to help choose the right filter system for your own individual needs, and will prepare a solution geared to optimum filtration at maximized cost efficiency.

### **The environment will thank you**

With Viledon air filters, you are making your own contribution towards a cleaner environment. So the least we can do is try to make our products as environmentally compatible as possible. When we make Viledon filter mats, we pay particular attention to the following points, with concomitant advantages for you:

- ▶ We do not use any additional bonding agents in our filter mat production process. This means homogeneous filter material which is easier to dispose of.
- ▶ Only high quality synthetic-organic fibers (e.g. polyester and polyolefine) are used in Viledon filter mats.
- ▶ The environment-friendly P15 filter mats can be cleaned by washing, beating or spraying, and can then be used again. Your advantage: this avoids waste and cuts your filtering costs.
- ▶ The filter media are not dyed, but are in natural white, i.e. no unnecessary chemicals are used.
- ▶ Viledon filter mats made of purely synthetic-organic fibers can be disposed of without any problems, e.g. in refuse incineration plants.
- ▶ All Viledon filter mats, both rolls and cut pieces, are supplied in recyclable transport packaging.



*Our goal:  
an ideal synthesis of  
cost efficiency ...*



*... technical  
peak performances ...*



*... and responsible  
environmental  
awareness!*

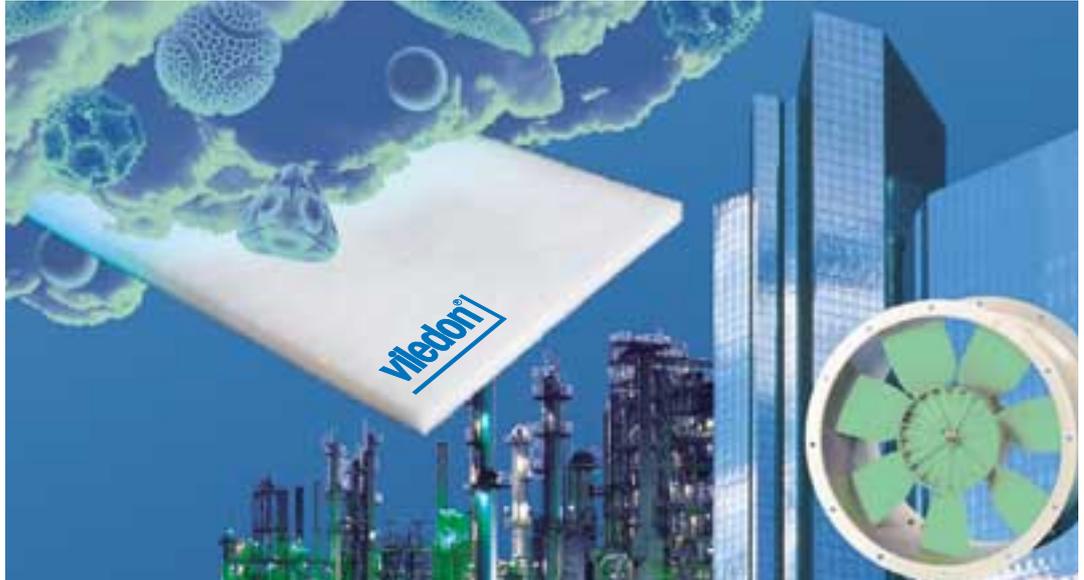
# The PSB series: The classic filter mats

**Coarse filtration**

**PSB/145 S**  
G 2  
EN 779

**PSB/275 S**  
G 3  
EN 779

**PSB/290 S**  
G 4  
EN 779



## The applications and special features of the PSB series

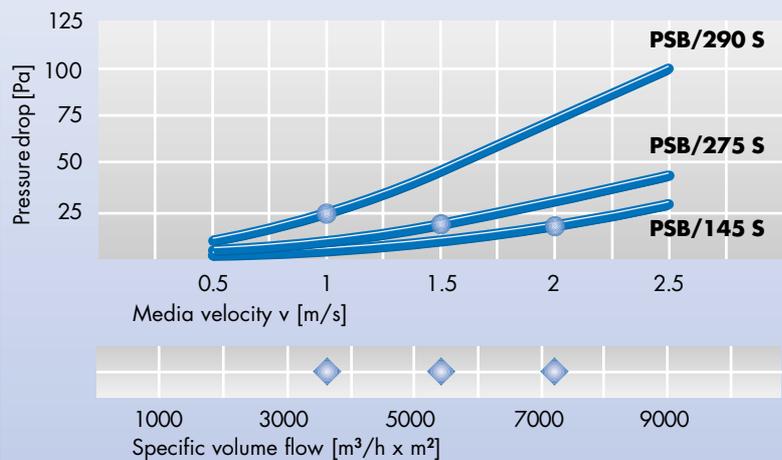
PSB filter mats are used for intake air filtration in all kinds of ventilation systems, e.g. in window air conditioners, climatic cabinets, air conditioning systems. They are also suitable for intake air prefiltration in paint spray booths and for solving exhaust air problems.

Thanks to their high dust holding capacity and the resultant long useful lifetimes, the PSB series is a particularly economic option. The filter mats from this series are especially effective in applications requiring stable arrestance in spite of high dust loading and high air flow rates.

### Initial pressure drop graphs

Pressure drop graphs indicate the main application range

● Nominal media velocity



Performance data		PSB/145 S	PSB/275 S	PSB/290 S
▶ Arrestance $A_a$ (EN 779)	%	67	83	91
▶ Recommended final pressure drop	Pa	125	200	200
<b>Supplied as</b>				
▶ rolls, useful width/length	mm/m	2000/40	2000/20	2000/20
▶ cut pieces	mm	to customer's specifications		

# The P 15 series: The ultra-durable filter mats



**Coarse filtration**

**P 15/150 S**  
G 2  
EN 779

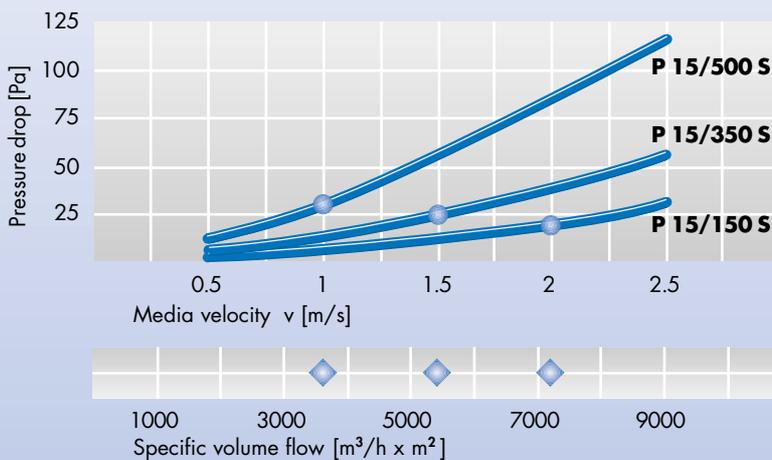
**P 15/350 S**  
G 3  
EN 779

**P 15/500 S**  
G 4  
EN 779

## Initial pressure drop graphs

Pressure drop graphs indicate the main application range

● Nominal media velocity



## The applications and special features of the P 15 series

P 15 filter mats are used for filtration in all kinds of ventilation systems.

The P 15/500 S is also suitable for prefiltration of the intake air in paint spray booths. In addition, the P 15 series is a favorite choice for applications demanding a high degree of resistance to aggressive substances (acids, alkalis, solvents). This filter series copes easily even with large volumes of air, thanks to the high mechanical strength of the material involved. Their high arrestance throughout their entire lifetime guarantees these filter mats maximized operational reliability.

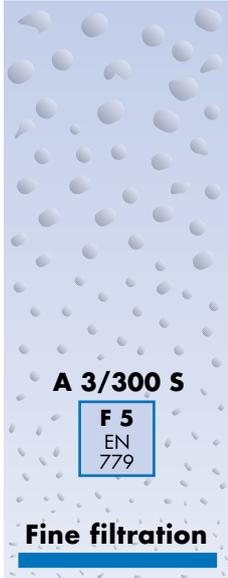
The P 15 filter material can be cleaned by washing, spraying or beating, after which it can be used again. Your advantage: you avoid waste and cut your filtration costs.

Performance data		P 15/150 S	P 15/350 S	P 15/500 S
▶ Arrestance $A_a$ (EN 779)	%	67	85	94
▶ Recommended final pressure drop	Pa	125	200	250
<b>Supplied as</b>				
▶ rolls, useful width/length	mm/m	2000/40	2000/30	2000/20
▶ cut pieces	mm	to customer's specifications		



# The A 3/300 S:

## The fine filter mat for refined applications



### The applications and special features of the A 3/300 S

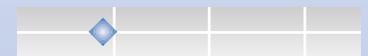
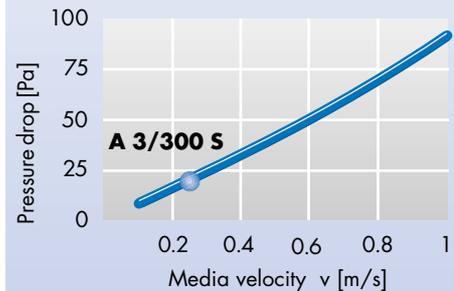
The A 3/300 S fine filter mat is a popular option for high quality final filtration in ventilation equipment and systems, and as a prefilter in multi-stage intake air systems. The A 3/300 S can be installed in both plane and zigzag configurations.

In all areas where high quality filtration of fine dust is required for protecting staff and machinery, the A 3/300 S is the versatile and obvious choice.

### Initial pressure drop graph

Indicates the main application range

● Nominal media velocity



Specific volume flow [m<sup>3</sup>/h x m<sup>2</sup>]

### Performance data

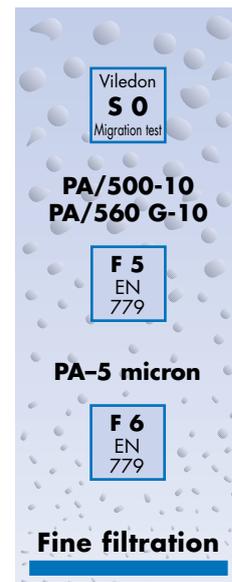
### A 3/300 S

▶ Arrestance $A_a$ (EN 779)	%	97
▶ Efficiency $E_a$ (EN 779)	%	46
▶ Recommended final pressure drop	Pa	250

### Supplied as

▶ rolls, useful width/length	mm/m	2000/20
▶ cut pieces	mm	to customer's specification

# The PA series: The professional filter mats for gleaming paintwork



## The applications and special features of the PA series

In surface treatment applications, PA fine filter mats are standard equipment for final intake air filtration in paint-spray systems and booths. They ensure the arrestance of particles > 10 µm which might cause visually perceptible surface imperfections. The new PA-5 micron filter mat – the first ceiling filter mat of Class F6, and developed specifically for use in modern-day paint spray processes – even arrests particles of > 5 µm almost completely. In order to ensure permanent retention of particles already collected throughout the entire operating lifetime, each individual fiber possesses an adhesion-activated surface.

## In a (migration test) class of their own: "S0"

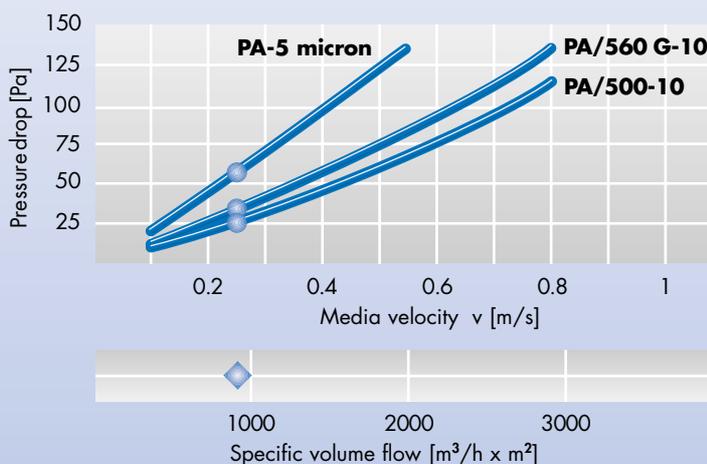
In order to determine the active adhesion of filter media, Freudenberg has developed the "migration test" method, which has meanwhile become standard procedure throughout the industry.

Viledon PA filter mats satisfy the most stringent requirements of this test, and meet or even exceed the best class "S0". Thanks to its actively adhesive fiber surface, the PA-5 micron filter mat is able to permanently bond more than 3 kg/m<sup>2</sup> of the extremely pourable Aloxite test dust – an increase of more than 50% compared to the PA/560 G-10, the best ceiling filter mat on the market up to now. Result: excellent process dependability for the user.

## Initial pressure drop graphs

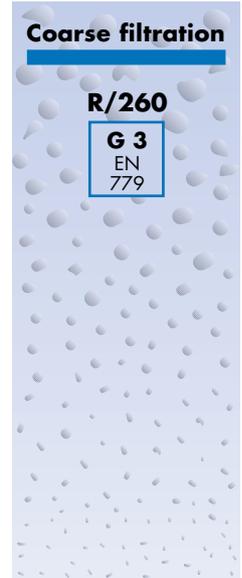
Pressure drop graphs indicate the main application range

● Nominal media velocity



Performance data	PA/500-10 and PA/560 G-10		PA-5 micron
	▶ Arrestance $A_a$ (EN 779)	%	98/99
▶ Efficiency $E_a$ (EN 779)	%	50/55	65
▶ Recommended final pressure drop	Pa	250	250–300
<b>Supplied as</b>			
▶ rolls, useful width/length	mm/m	2000/20 1600/22	2000/20
▶ cut pieces	mm	to customer's specification	

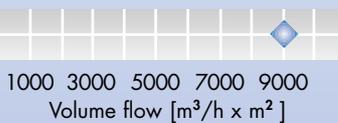
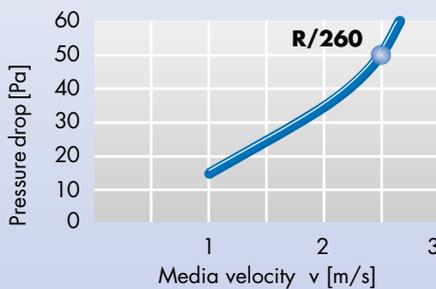
# The R/260 roll filter: For traditional coarse dust filtration



## Initial pressure drop graph

Indicates the main application range

● Nominal media velocity



## The applications and special features of the R/260:

The R/260 filter mat is used for traditional coarse filtration in roll filter systems from various manufacturers (like AAF, Ceag, Delbag, Farr, Klimat, Schirp, Vokes). The clean air side of the

R/260 is reinforced by a support fabric to ensure even and reliable advance of the filter material concerned.

From long years of experience, we know that systems fitted with 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.

Performance data		R/260
▶ Arrestance $A_a$ (EN 779)	%	80
▶ Recommended final pressure drop	Pa	160
<b>Supplied as</b>		
▶ ready to install rolls: length 20 m		Widths: 810, 1110, 1410, 1710 mm and 838, 1143, 1448, 1753, 2058 mm

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case.

You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.