

MÜHLEN SOHN GMBH & CO. KG SINCE 1880

CUSTOMER SOLUTIONS

# FLUITEX<sup>®</sup> FLUIDIZING FABRICS

The best solution for the transport and  
storage of powder bulk materials



[WWW.MUHLEN-SOHN.COM](http://WWW.MUHLEN-SOHN.COM)

MUHLEN SOHN 









#### QUICK OVERVIEW

# SECTORS AND AREAS OF APPLICATION

---

Muhlen Sohn FLUITEX® fluidizing fabrics are used for the transportation of powder or granulated bulk materials all over the world. There are virtually no limits to how they can be used. Our fabrics ensure fast, trouble-free air slide transportation, total discharge for silos, trucks, railway wagons and vessels, as well as optimal coating in fluidizing basins.


## FIELDS OF APPLICATION

---

- Cement industry
- Lime and gypsum industry
- Alumina industry
- Coal-fired power plants
- Waste burning plants
- Chemical industry
- Fertilizer industry
- Powder coating

## AREAS OF APPLICATION

---

- Pneumatic loading and discharging systems
  - Air slides
  - Storage and homogenization silos
  - Fluidizing basins
  - Discharging systems for all kinds of transport (trucks – railway wagons – vessels – containers)
- 

**DURABILITY**  
**WORLDWIDE EXPORT**  
**TECHNOLOGY**  
**QUALITY**  
**MADE IN GERMANY**  
**TEAR**

**ABRASION RESISTANCE**

**MULTI FILAMENT YARNS**

**FLEXIBILITY**

**EXPERIENCE**

**KNOW-HOW**

**RELIABILITY**

**STRENGTH**

**CUT-TO-MEASURE**

CONTINUOUSLY IMPROVING

# TRADITION AND INNOVATION

---

Muhlen Sohn has been manufacturing FLUITEX® fluidizing fabrics for decades. Many years of experience, along with close collaboration with Original Equipment Manufacturers (OEM), have allowed us to align our fabrics with identified requirements. Weaving technology and choice of material are the key criteria for uniform, trouble-free bulk goods transport and fast, total discharge.

An important aspect of this is the constant, even air permeability provided by our highly developed weaving technology. Our quality system and DIN EN ISO 9001:2015 certification guarantee that our fabrics comply with the required specifications, meter after meter.

Our use of high quality yarns and our special weaving technology minimize abrasion, with an extremely positive impact on the fabric's lifetime. As a result, fabrics need changing less often and system downtime is heavily reduced.

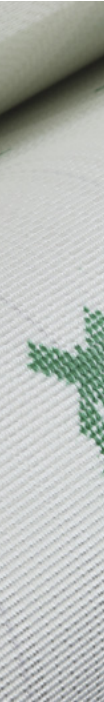
Our broad product portfolio offers solutions for all bulk materials transportation, storage, homogenization or discharge applications. We also produce meta-aramid or para-aramid fiber fabrics suitable for high-temperature applications and acid- or lye-influenced environments.

## MUHLEN SOHN – SINCE 1880

---

Muhlen Sohn has been making technical advances in product development for well over a century. Today we develop, produce and sell high-quality heavy-duty fabrics for technically demanding applications. We see ourselves primarily as a manufacturer but also as a skilled and innovative development and service OEM partner in mechanical and plant engineering.

Our combination of tradition and innovation is the key to our success. We have been bringing new impulse to our sector ever since the firm was first established. In today's highly competitive mechanical and plant engineering market this makes us not only a constant presence but synonymous with quality and technology leadership.







**SUSTAINABLE  
GROWTH  
SINCE 1880**







**SUBSTANTIAL,  
LONG-LASTING  
PRODUCTS**



YOUR BENEFIT, IS OUR GOAL

# CUSTOMER-FOCUSED PRODUCTION

For decades, leading plant manufacturers have been putting their trust in Muhlen Sohn's highly customer-focused production. We deliver outstanding, efficient solutions for almost any customer requirement, with the mark of highest quality – "Made in Germany." Our patented weaving technology, reliability, and comprehensive service offering guarantee you a tailor-made product that meets all of your needs. We are constantly feeding back practical experience and development results into our products and production processes.

## WEAVING TECHNOLOGY

We have combined decades of production experience in technical heavy-duty fabrics for pneumatic storage and transport with the ongoing development of our manufacturing facilities, to achieve optimum results. The quality of our fabrics is consistently dependable; and they are tailored to the plant manufacturer's specifications to provide the best possible outcome for our customers. Thanks to modern looms, we can now produce widths of up to 2,400 mm.

## LASERS

Using computer-controlled laser-cutting machines, we can maintain a high degree of accuracy and repeatability in series components.

## CUT-TO-MEASURE MANUFACTURING

We can supply fluidizing fabrics cut to customer specifications or customer drawings, and equipped with suitable installation holes.

## FLUITEX® – TO YOUR ADVANTAGE

- Long lifetime
- Low/no downtime
- High abrasion resistance
- Even air permeability
- Smooth surface
- No banana effect
- Energy efficient
- Rapid/total discharge
- Low maintenance costs
- Dimension stability
- Self cleaning
- High tensile strength
- No caking
- Highest productivity

PRODUCT OVERVIEW

# TECHNICAL FEATURES

## FLUITEX® E

Product Name	Air permeability at 400 m³/m²/h²	Weight³	Operating temperature range	Max. width⁴	Tensile strength⁵	
					Warp	Weft

**FLUITEX® E - Thicknesses: 3 mm, Polyester (PES)**

FLUITEX® E 150/3	150 mmWG	2,400 g/m²	-60 °C – +150 °C temporary: +200 °C	2,400 mm	> 4,500 N/cm	> 1,000 N/cm
------------------	----------	------------	--	----------	--------------	--------------

**FLUITEX® E - Thicknesses: 4 mm, Polyester (PES)**

FLUITEX® E 350/4	350 mmWG	2,900 g/m²	-60 °C – +150 °C temporary: +200 °C	2,400 mm	> 4,500 N/cm	> 2,000 N/cm
FLUITEX® E 800/4	800 mmWG	3,100 g/m²				
FLUITEX® E 1200/4	1,200 mmWG	3,200 g/m²				
FLUITEX® E 1600/4	1,600 mmWG	3,300 g/m²				

**FLUITEX® E - Thicknesses: 5 mm, Polyester (PES)**

FLUITEX® E 150/5	150 mmWG	3,400 g/m²	-60 °C – +150 °C temporary: +200 °C	2,400 mm	> 4,500 N/cm	> 2,500 N/cm
FLUITEX® E 350/5	350 mmWG	3,700 g/m²				
FLUITEX® E 800/5	800 mmWG	3,900 g/m²				
FLUITEX® E 1200/5	1,200 mmWG	4,000 g/m²				
FLUITEX® E 1600/5	1,600 mmWG	4,100 g/m²				

**FLUITEX® E - Thicknesses: 6 mm, Polyester (PES)**

FLUITEX® E 350/6	350 mmWG	4,350 g/m²	-60 °C – +150 °C temporary: +200 °C	2,400 mm	> 5,000 N/cm	> 3,000 N/cm
FLUITEX® E 800/6	800 mmWG	4,700 g/m²				
FLUITEX® E 1200/6	1,200 mmWG	4,800 g/m²				

**FLUITEX® E - Thicknesses: 8 mm, Polyester (PES)**

FLUITEX® E 350/8	350 mmWG	5,350 g/m²	-60 °C – +150 °C temporary: +200 °C	2,400 mm	> 7,000 N/cm	> 4,500 N/cm
FLUITEX® E 800/8	800 mmWG	5,700 g/m²				

**PES - Thicknesses: 0.6 mm, Polyester (PES)**

PES 700-1/T	350 mmWG	400 g/m²	-60 °C – +150 °C temporary: +200 °C	1,710 mm	> 1,000 N/cm	> 500 N/cm
-------------	----------	----------	--	----------	--------------	------------

Product Name	Material	Air permeability at 400 m³/m²/h²	Weight³	Operating temperature range	Diameter	Tensile strength⁵
--------------	----------	----------------------------------	---------	-----------------------------	----------	-------------------

**SILO HOSE**

SILO HOSE	Polyester, coated with yellow polyurethane on one side	on request	210 g/m²	according to data sheet	(inner Ø): 71 mm (outer Ø): 73 mm wall thickness: approx. 1 mm (further Ø on request)	according to data sheet
-----------	--	------------	----------	-------------------------	--	-------------------------



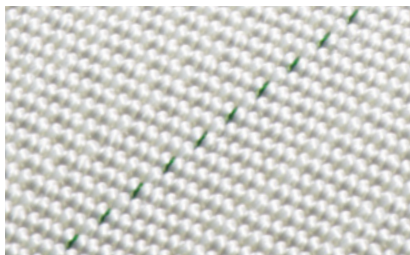
STRONG AND SOLID

# PRODUCT PORTFOLIO FLUIDIZING FABRICS



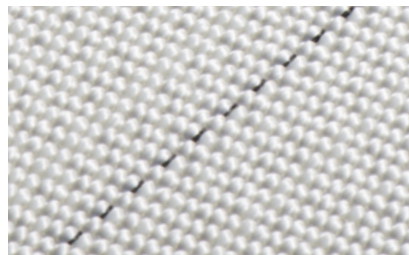
## FLUITEX® E 150

150 mm water gauge  
Thicknesses: 3, 5 mm  
Without tracer thread



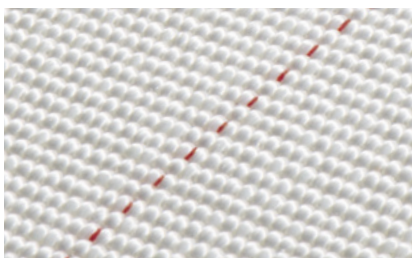
## FLUITEX® E 350

350 mm water gauge  
Thicknesses: 4, 5, 6, 8 mm  
Green tracer thread



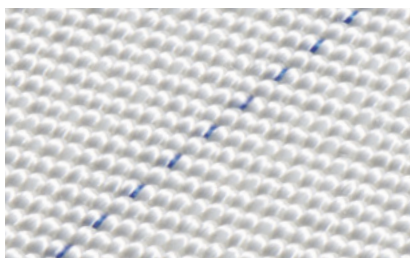
## FLUITEX® E 800

800 mm water gauge  
Thicknesses: 4, 5, 6, 8 mm  
Black tracer thread



## FLUITEX® E 1200

1,200 mm water gauge  
Thicknesses: 4, 5, 6 mm  
Red tracer thread



## FLUITEX® E 1600

1,600 mm water gauge  
Thicknesses: 4, 5 mm  
Blue tracer thread



## PES 700-1/T

Very thin polyester fabric  
Thickness: 0.6 mm



## SILO HOSE

71 mm internal diameter  
Wall thickness: 1 mm

Muhlen Sohn fluidizing fabrics are supplied with colored tracer threads so that their various pressure difference values can be identified at a glance.

<sup>1</sup> Based on DIN EN ISO 5084.

<sup>2</sup> 1 mmWG = 10 N/m<sup>2</sup> = 10 Pa.

<sup>3</sup> Measured at room temperature based on DIN EN 12127.

<sup>4</sup> For tolerances and further technical data see data sheet. Special sizes on request.

<sup>5</sup> Tensile strength based on DIN EN ISO 13934-1.



# PRODUCT PORTFOLIO CONES AND DISCS

## SPECIAL MANUFACTURING

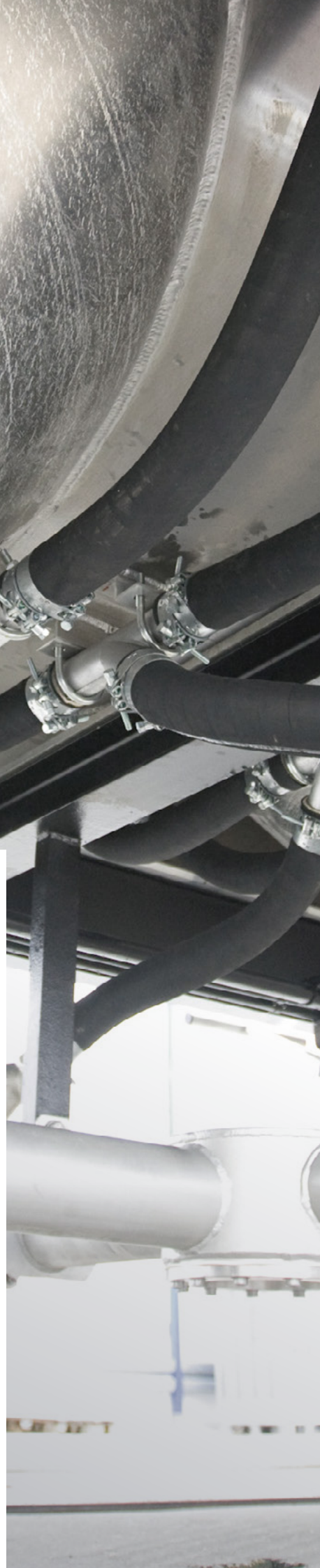
We produce also individual discs and custom parts according to customer specifications e.g. with flange, collar, impregnation, piping, cord lace or sponge rubber. Tolerances and further technical data s on request.



DISC



DISCHARGE CONE





## PRODUCT OVERVIEW

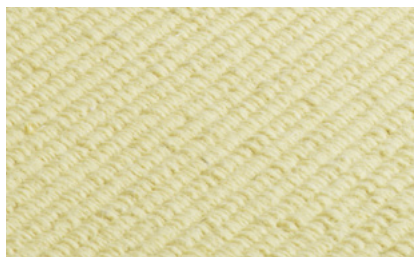
# TECHNICAL FEATURES

## FLUITEX® AD / AN

Product Name	Air permeability at 400 m <sup>3</sup> /m <sup>2</sup> /h <sup>2</sup>	Weight <sup>3</sup>	Operating temperature range	Max. width <sup>4</sup>	Tensile strength <sup>5</sup>	
					Warp	Weft
<b>FLUITEX® AD - Thickness<sup>1</sup>: 4 mm, Para-Aramid</b>						
FLUITEX® AD 800/4	800 mmWG	2,900 g/m <sup>2</sup>	-60 °C – +250 °C temporary: +350 °C	2,200 mm	> 3,500 N/cm	> 2,000 N/cm
<b>FLUITEX® AD - Thicknesses<sup>2</sup>: 5 mm, Para-Aramid</b>						
FLUITEX® AD 350/5	350 mmWG	3,250 g/m <sup>2</sup>	-60 °C – +250 °C temporary: +350 °C	2,200 mm	> 3,500 N/cm	> 3,000 N/cm
FLUITEX® AD 800/5	800 mmWG	3,400 g/m <sup>2</sup>				
<b>FLUITEX® AN - Thicknesses<sup>2</sup>: 4 mm, Meta-Aramid</b>						
FLUITEX® AN 350/4	350 mmWG	2,750 g/m <sup>2</sup>	-60 °C – +250 °C temporary: +300 °C	2,200 mm	> 2,500 N/cm	> 2,000 N/cm
FLUITEX® AN 800/4	800 mmWG	2,850 g/m <sup>2</sup>				
<b>FLUITEX® AN - Thicknesses<sup>2</sup>: 5 mm, Meta-Aramid</b>						
FLUITEX® AN 350/5	350 mmWG	3,250 g/m <sup>2</sup>	-60 °C – +250 °C temporary: +300 °C	2,200 mm	> 2,500 N/cm	> 3,000 N/cm
FLUITEX® AN 800/5	800 mmWG	3,350 g/m <sup>2</sup>				

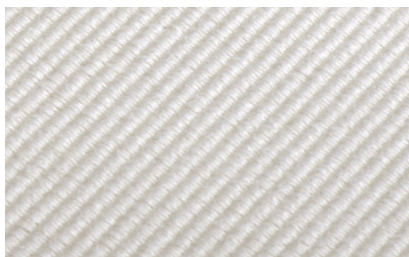
Fluitex® AD fabrics are highly heat-resistant and can even withstand temperatures of up to 350 °C for short periods of time. Our AD fabric is also extremely cut-resistant, providing maximum service life under extreme conditions and with very sharp-edged materials.

Fluitex® AN fabrics are highly resistant to temperature as well as to acids and lyes, which makes them the best solution for high chemical exposure, and for temperatures of up to 250 °C.



### FLUITEX® AD

Para-Aramid fabric  
350 and 800 mm water gauge  
Thicknesses: 4, 5 mm



### FLUITEX® AN

Meta-Aramid fabric  
350 and 800 mm water gauge  
Thicknesses: 4, 5 mm

<sup>1</sup> Based on DIN EN ISO 5084.

<sup>2</sup> 1 mmWG = 10 N/m<sup>2</sup> = 10 Pa.

<sup>3</sup> Measured at room temperature based on DIN EN 12127.

<sup>4</sup> For tolerances and further technical data see data sheet. Special sizes on request.

<sup>5</sup> Tensile strength based on DIN EN ISO 13934-1.

TEST RESULTS

# ABRASION AND AIR PERMEABILITY

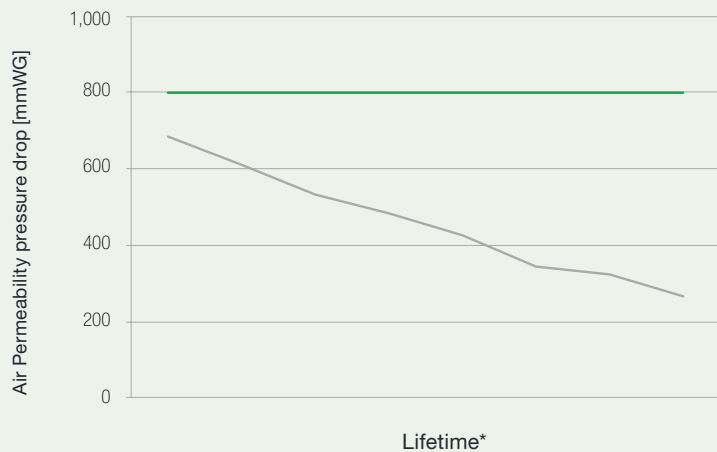
How a fabric wears is a measure of its robustness. Abrasion is a clear indication of lifetime when comparing different yarns. Implementation conditions: Textile abrasion testing in accordance with DIN EN ISO 12947 using “Martindale” Abrader.

Load	Abrasion	Fabric thickness	Temperature conditions
Approx. 2.2 kp	Sand paper, grain 80	5.0 mm	20°C (room temperature)

## AIR PERMEABILITY PRESSURE DROP OVER THE LIFETIME [MMWG]

Compared to the FLUITEX® fabric which shows a consistent air permeability pressure drop over the entire lifetime\* of the fabric, the competitive spun yarn fabric has up to 50% less fabric lifetime\* due to decreasing air permeability resistance.

- COMPETITOR SPUN YARN FABRICS
- FLUITEX® E 800/5

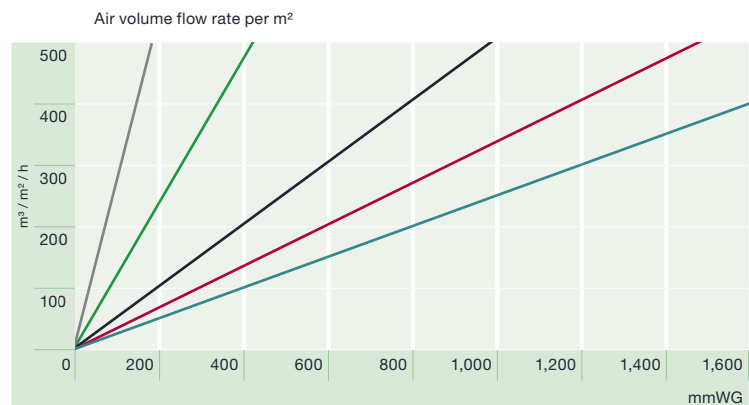


\*Lifetime depends on application, bulk material, etc.

## AIR PERMEABILITIES

Identify your value coordinates on the chart. Read the chart from right to left to identify the correct product for your needs. The nearest fabric type is the one best suited to your application.

- FLUITEX® E 150
- FLUITEX® E / AD / AN 350
- FLUITEX® E / AD / AN 800
- FLUITEX® E 1200
- FLUITEX® E 1600







## THE BENEFITS OF OUR PRODUCTS

PROPERTIES	YOUR ADVANTAGES
Smooth surface	<ul style="list-style-type: none"> <li>Prevents abrasion</li> <li>No attraction of moisture – no culture of fungi, bacteria and rot</li> <li>No residue formation - no baking</li> <li>Strong self-cleaning effect</li> <li>Trouble-free operation, complete discharge</li> </ul>
Special weaving technology	<ul style="list-style-type: none"> <li>Prevents abrasion</li> <li>Even air permeability</li> <li>Strong self-cleaning effect - no baking</li> <li>No pressure loss during lifetime</li> <li>Ideal mixing / fluidizing</li> </ul>
Constant air permeability	<ul style="list-style-type: none"> <li>Permanent material flow without interruptions</li> <li>Complete discharge without residues</li> <li>Ideal mixing / fluidizing</li> </ul>
High tensile strength	<ul style="list-style-type: none"> <li>Dimensionally stable fabric - no elongation</li> <li>No banana effect</li> </ul>
RESULT	<ul style="list-style-type: none"> <li>Highest productivity</li> <li>High energy efficiency</li> <li>Long lifetime</li> <li>Reduced maintenance costs</li> </ul>

## MÜHLEN SOHN GMBH & CO. KG

Lindenstrasse 16/1  
89134 Blaustein · Germany  
Telefon: +49 7304 / 801-0  
info@muehlen-sohn.de  
www.muehlen-sohn.de