Overview - Shielding fabrics

Here you find fabrics that are permanent in our assortement.

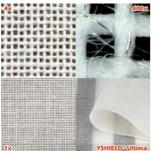
Please find many limited special items in the internet.

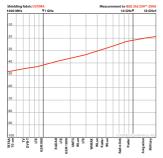
			_		_		_			_			_				
Silver-Grid Recommendation		13 dB	,	×	-			Yes	Cotton, poly- ester, silver	150 cm	130 g/m ²	White	Yes	Little	None	Very High	Very
Silver-Silk		60 dB	×	×	-		Limited	Limited	Nylon, silver	130 cm	45 g/m ²	Silver/ Brown	9V	Strong	None	High	Very
Silver-Elastic		50 dB	×	×	-		Yes	-	Span- dex, silver	155 cm	130 g/m ²	Gray/ silver	No	Strong	None	Very high	Very
Steel-Gray Recommendation!		35 dB	×	×	Yes		Yes	Yes	Cotton, Cotton, poly-ester, ester, stainless stainless steel	150 cm	120 g/m ²	Gray	No		None	Very high	Very
Steel-Twin Recommendation!		35 dB	×	×	Yes			Yes		150 cm	190g/m ²	Dark	S		None	Very high	Very
Silver-Twin		57 dB	×	×	Yes			Limited	Cotton, polyes- ter, silver	150 cm	150 g/m ²	Beige/ brown	Yes	Little	None	High	Good
Silver-Tulle Recommendation!		50 dB	×	×	Yes	Yes		Limited	Nylon, silver	140 cm	40 g/m ²	Gray/ silver	No	Little	Medium	High	Very
New-Daylite		25 dB	×		Yes	Yes		-	Polyes- ter, copper, silver	260 cm	65 g/m ²	White	No	No	High	Very high	Normal
Wear	XXXXXX XXXXXX	30 dB	×		Limited		Limited	-	Cotton, copper, silver	150 cm	70 g/m ²	White	Yes	No	None	Very high	Normal
Evolution		30 dB	×		Yes			1	Polyes- ter, copper, silver	250 cm	80 g/m ²	White	No	No	Medium	Very high	Good
Voile Recommendation!		36 dB	×		Yes	Yes		-	Polyes- ter, copper, silver	250 cm	55 g/m ²	White	No	No	High	Very high	Very
Naturell Ultra Recommendation!		40 dB	×	×	Yes	Yes		Yes	Cotton, copper, silver, carbon	250 cm	115 g/m ²	Ecru- white	Yes	No	Medium	Very high	Very
Naturell Recommendation!		38 dB	×	-	Yes	Yes		-	Eco- cotton, copper, silver	250 cm	70 g/m ²	Ecru- white	Yes	No	Medium Medium Medium	Very high	Very
Ultima Recommendation!		41 dB	×		Yes	Yes			Cotton, copper, silver	250 cm	85 g/m ²	Ecru- white	Yes	oN	Medium	Very high	Very
	Picture (magnified)	Attenuation 1 GHz	Shielding HF	Shielding LF / Groundable	As (net) curtain	As canopy	For clothing	For earthing products	Materials	Width	Weight	Color	Dyeing possible	Discoloration silver	Optical transparency	Common quality grade	Result washing

ULTIMA - Shielding fabric (HF)

OUR RECOMMENDATION







Characteristics

ULTIMA™ from Swiss-Shield® is a **finely woven cotton fabric** for the shielding of high-frequency electromagnetic fields (HF).

- Cotton fabric without chemicals, certified to Öko-Tex 100 and 1000
- High screening attenuation for a cotton fabric
- Textile characteristics: Washable, easy to iron and process
 - Quality grade: Very high

Application

Typical application as **curtain**. Not electrically conductive.

Technical data

- Width: 250 cm, +/- 2 cm • Length: Available by the
- meter, 120 meter rolls
- Attenuation: 41 dB, two-layer 54 dB
- Color: Ecru-White
- Raw materials: 82 % cotton, 17 % copper, 1 % silver
- Weight: 85 g/m²
- Certificates: Öko-Tex 100 and 1000

Grounding

Cannot be grounded. Low-frequency electrical fields (LF) must be reduced by additional procedures. We recommend to shield this fields or to switch it off with a demand switch.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C



Iron without steam at degree 1



No drying in tumble dryers



No bleaching



No chemical dry-cleaning

Cleaning with our special washing detergent **TEXCARE**. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

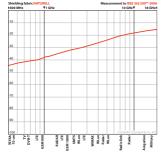
About Swiss Shield®

NATURELL - Shielding fabric (HF)

OUR RECOMMENDATION







Characteristics

NATURELL™ from Swiss-Shield® is a semi-transparent ecological **cotton fabric** for the shielding of high-frequency electromagnetic fields (HF).

- Ecological cotton fabric without chemicals, certified to Öko-Tex 100 and 1000
- High screening attenuation for a cotton fabric
- **Textile characteristics:** Washable, easy to iron and
- Quality grade: Very high

Application

Typical application as **curtain**. Not electrically conductive.

Technical data

- Width: 250 cm, +/- 2 cm
- Length: Available by the meter, 120 meter rolls
- Attenuation: 38 dB. two-laver 53 dB
- Color: Ecru-White
- Raw materials: 82 % cotton, 17 % copper, 1 % silver
- Weight: 70 g/m²
- Certificates: Öko-Tex 100 and 1000

Grounding

Cannot be grounded. Low-frequency electrical fields (LF) must be reduced by additional procedures. We recommend to shield this fields or to switch it off with a demand switch.

Screening attenuation

The screening attenuation is regularly tested in our own **EMC laboratory**. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, **IEEEE Std 1128-1998, ASTM** A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C Iron without



steam at degree 1



No drying in tumble dryers



No bleaching



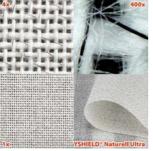
No chemical dry-cleaning

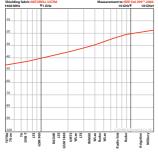
Cleaning with our special washing detergent **TEXCARE**. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

About Swiss Shield®

NATURELL ULTRA - Shielding fabric (HF+LF)







Characteristics

NATURELL ULTRA™ from Swiss-Shield[®] is a **semi-transparent** cotton fabric for the shielding of high-frequency electromagnetic fields (HF) and low-frequency electric fields (LF).

NATURELL ULTRA™ is the second fabric of a **new product series** from Swiss Shield®. In the new ULTRA-series the silver-/ copper-filament is coated with carbon, why these fabrics are electrically conductive to shield low-frequency electric fields (LF). Perfect for bed canopies.

- Cotton fabric certified to Öko-Tex 100 and 1000 **Textile characteristics:** Washable, easy to iron and process
- Quality grade: Very high

Application

Typical application as curtain or to sew a **bed canopy**. Electrically conductive and therefore groundable.

Technical data

- Width: 250 cm, +/- 2 cm
- Length: Available by the meter, 120 meter rolls
- Attenuation: 40 dB,
 - two-laver 54 dB Color: Écru-White
- Raw materials: 81 % cotton, 17 % copper, 1 % silver, 1 % carbon
- Weight: 115 g/m²

Grounding

Due to the surface conductivity this fabric can be grounded to shield low frequency (LF) electric fields.

Screening attenuation

The screening attenuation is regularly tested in our own **EMC laboratory**. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find

the test report at our homepage directly on the product page.

YSHIELD®

Care



Gentle cycle at 30°C



Iron without steam at degree 1



No drying in tumble dryers



No bleaching



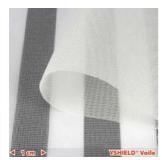
No chemical dry-cleaning

Cleaning with our special washing detergent **TEXCARE**. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

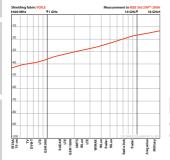
About Swiss Shield®

VOILE - Shielding fabric (HF)

OUR RECOMMENDATION







Characteristics

VOILE from Swiss-Shield® is a **transparent voile-fabric** for the shielding of high-frequency electromagnetic fields (HF).

Our **technically best fabric** regarding to the attenuation, transparency and the mechanical stability.

- High transparency at high screening attenuation
- Very elegant and slightly glossy
- Crease resistant polyester
- Textile characteristics: Washable, easy to iron and process
- Quality grade: Very high

Application

Typical application as elegant **net curtain** or to sew a **bed canopy**. Not electrically conductive.

Technical data

- Width: 250 cm, +/- 2 cm
- Length: Available by the meter, 120 meter rolls
- Attenuation: 36 dB, two-layer 51 dB
- Color: White
- Raw materials: 83 % polyester, 16 % copper, 1 % silver
- Weight: 55 g/m²

Grounding

Cannot be grounded. Low-frequency electrical fields (LF) must be reduced by additional procedures. We recommend to shield this fields or to switch it off with a demand switch.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C



Iron without steam at degree 1



Drying at low temperature



No bleaching

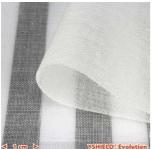


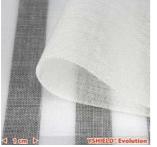
No chemical dry-cleaning

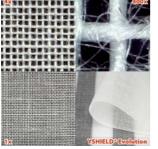
Cleaning with our special washing detergent **TEXCARE**. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

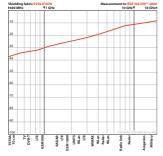
About Swiss Shield®

EVOLUTION - Shielding fabric (HF)









Characteristics

EVOLUTION™ from Swiss-Shield® is a semi-transparent Trevira® fabric for the shielding of high-frequency electromagnetic fields (HF).

- Crease resistant Trevira®-polyester
- **Textile characteristics:** Washable, easy to iron and
 - Quality grade: Very high

Application

Typical application as curtain. Not electrically conductive.

Technical data

- Width: 250 cm, +/- 2 cm
- Length: Available by the meter, 120 meter rolls
- Attenuation: 30 dB. two-laver 43 dB
- Color: White
- Raw materials: 91 % polyester (Trevira), 8.5 % copper, 0.5 % silver
- Weight: 80 g/m²

Grounding

Cannot be grounded. Low-frequency electrical fields (LF) must be reduced by additional procedures. We recommend to shield this fields or to switch it off with a demand switch.

Screening attenuation

The screening attenuation is regularly tested in our own **EMC laboratory**. We have measurement setups due to the following standards: **ASTM** D4935-10, IEEE Std 299-2006, **IEEEE Std 1128-1998, ASTM** A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C



Iron without steam at degree 1

YSHIELD®



Drying at low temperature



No bleaching



No chemical dry-cleaning

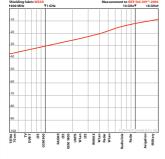
Cleaning with our special washing detergent **TEXCARE**. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

About Swiss Shield®

WEAR - Shielding fabric (HF)







Characteristics

WEAR™ from Swiss-Shield® is a **compact cotton fabric** for the shielding of high-frequency electromagnetic fields (HF).

- Good haptics and pleasant skin feel
- Textile characteristics: Washable, easy to iron and process
- Quality grade: Normal

Application

Typical application for **sewing all articles of clothing**. Not electrically conductive.

Technical data

- Width: 150 cm, +/- 2 cm
- Length: Available by the meter, 80 meter rolls
- Attenuation: 30 dB, two-laver 39 dB
- Color: White; dyeing possible
- Raw materials: 90 % cotton, 9.5 % copper, 0.5 % silver
- Weight: 70 g/m²

Grounding

Cannot be grounded. Low-frequency electrical fields (LF) must be reduced by additional procedures. We recommend to shield this fields or to switch it off with a demand switch.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C



Iron without steam at degree 1



No drying in tumble dryers



No bleaching



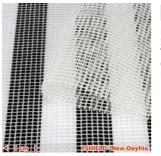
No chemical dry-cleaning

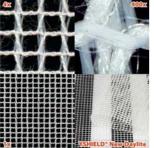
Cleaning with our special washing detergent **TEXCARE**. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

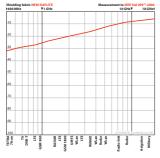
About Swiss Shield®

Paint

NEW-DAYLITE - Shielding fabric (HF)







Characteristics

NEW-DAYLITE™ from Swiss-Shield® is a **highly-transparent Trevira® fabric** for the shielding of high-frequency electromagnetic fields (HF).

- Yery high transparency
 Crease resistant
 - Crease resistant Trevira®-polyester
- Textile characteristics: Washable, easy to iron and process
- Quality grade: Very high

Application

Typical application as **net curtain** or to sew a **bed canopy**. Not electrically conductive.

Technical data

- **Width: 260 cm**, +/- 2 cm
- Length: Available by the meter. 120 meter rolls
 - Attenuation: 25 dB, two-layer 34 dB
 - Color: White
- Raw materials: 78 % polyester (Trevira), 21 % copper, 1 % silver
- Weight: 65 g/m²
- Certificates: Öko-Tex 100 and 1000

Grounding

Cannot be grounded. Low-frequency electrical fields (LF) must be reduced by additional procedures. We recommend to shield this fields or to switch it off with a demand switch.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C



Iron without steam at degree 1



Drying at low temperature



No bleaching



No chemical dry-cleaning

Cleaning with our special washing detergent **TEXCARE**. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

About Swiss Shield®

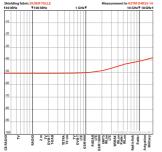
SILVER-TULLE - Shielding fabric (HF+LF)

OUR RECOMMENDATION

YSHIELD®







Characteristics

SILVER-TULLE is a **transparent fully silvered nylon fabric** for the shielding of high-frequency radiation (HF) and low-frequency electric fields (LF).

By comparison to competitor products, this fabric has a thicker and better silver plating and don't loose its screening attenuation while washing or movement.

This fabric is hard to sew accurately, because it's stretchy and pulls out of place easily when you try to sew on it. Please note that customized curtains are difficult to sew dimensionally stable!

- Good transparency at very high screening attenuation
- Contactable (groundable) to shield LF electric fields
- Textile similar characteristics: Washable, easy to process. Exception: Do not iron
- Quality grade: Very high

Application

As **net curtain**, as room divider in laboratorys, medical practices, etc. and due to the highest washability to sew a **bed canopy**.

Technical data

- Width: 140 cm, +/- 2 cm
- Length: Available by the meter, 100 meter rolls
- Attenuation: 50 dB, two-layer 67 dB
- Color: Gray, silver
- This silver-fabric can discolorate and has a limited durability, more under "Information silver-fabrics"
- Raw materials: 80 % nylon, 20 % silver
- Weight: 40 g/m²
- Surface conductivity: 0.8 ohm (square resistance R□)

Grounding

Due to the surface conductivity this fabric **can be grounded** to shield low frequency (LF) electric fields.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C



No ironing



No drying in tumble dryers



No bleaching



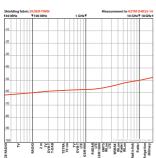
No chemical dry-cleaning

SILVER-TWIN - Shielding fabric (HF+LF)









Characteristics

SILVER-TWIN is a compact, double-ply cotton/silver fabric for the shielding of high-frequency radiation (HF) and low-frequency electric fields (LF).

The frontside is made of white cotton, while the backside is densely woven with a silver thread. Despite the extremely high attenuation due to the dark silver threads on the backside, this fabric has a light gray front side!

- Very high attenuation, even at high frequencies!
- **Excellent cost/performance** ratio
- Contactable (groundable) to shield LF electric fields
- **Textile characteristics:** Washable, easy to iron and process
- Quality grade: High

Application

As curtain, to sew thicker clothes, handy bags, etc..

Technical data

- Width: 150 cm, +/- 2 cm
- Length: Available by the meter, 150 meter rolls
- Attenuation: 57 dB
- Color: Frontside light gray, backside silver
- This silver-fabric can discolorate and has a limited durability, more under "Information silver-fabrics"
- Raw materials: 50 % cotton, 35 % polyester, 15 % silver
 - Weight: 150 g/m²
- Surface conductivity: 0.25 ohm (square resistance R□)

Grounding

Due to the surface conductivity this fabric can be grounded to shield low frequency (LF) electric fields.

Screening attenuation

YSHIELD®

The screening attenuation is regularly tested in our own **EMC laboratory**. We have measurement setups due to the following standards: **ASTM** D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



at 30°C



steam at degree 1



No drying in tumble dryers



No chemical

Cleaning with our special washing detergent TEXCARE. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

Gentle cycle Iron without

No bleaching

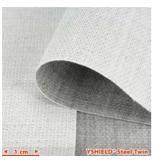


dry-cleaning

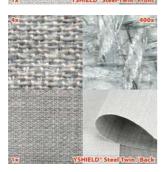
STEEL-TWIN - Shielding fabric (HF+LF)

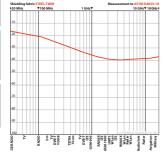
OUR RECOMMENDATION

YSHIELD®









Characteristics

STEEL-TWIN is a **compact cotton/polyester/stainless-steel fabric** for the shielding of high-frequency radiation (HF) and low-frequency electric fields (LF).

The frontside is made of white cotton, while the backside is densely woven with a stainless steel thread. Despite the high attenuation due to the gray stainless steel threads on the backside, this fabric has a light gray front side!

- Our most long-lasting and stable fabric
- Best price/value ratio of all fabrics!
- Good screening attenuation, especially at high frequencies!
- Contactable (groundable) to shield LF electric fields
- Textile characteristics: Washable, easy to iron and process
- Quality grade: Very high

Application

As curtain or for floor mats.

Technical data

- Width: 150 cm, +/- 2 cm
- Length: Available by the meter, 150 meter rolls
- Attenuation: 35 dB, two-layer 50 dB
- Color: Frontside light gray, backside silver
- Raw materials: 68 % cotton, 17 % polyester, 15 % stainless steel
 - Weight: 190 g/m²
- Surface conductivity: 100-800 ohm (square resistance R□)

Grounding

Due to the surface conductivity this fabric **can be grounded** to shield low frequency (LF) electric fields.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.





Gentle cycle at 30°C



Iron without steam at degree 1



No drying in tumble dryers



No bleaching

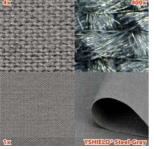


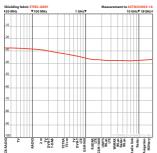
No chemical dry-cleaning

STEEL-GRAY - Shielding fabric (HF+LF)

OUR RECOMMENDATION







Characteristics

STEEL-GRAY is a compact cotton/polyester/stainless-steel **fabric** for the shielding of high-frequency radiation (HF) and low-frequency electric fields (LF).

For clothing the steel threads aren't as soft on the skin as the silver threads of Silver-Jersey or Silver-Knit, it feels like a little scratchy woolen sweater. Tip: Wear a pyjama in bedding or a sleeping bag made from Steel-Active, then nothing scratches! Or use it as under-bedding. Order a free sample for testing!

- Our most long-lasting and stable fabric
- Best price/value ratio of all fabrics!
- Good screening attenuation, especially at high frequencies!
- Contactable (groundable) to shield LF electric fields
- **Textile characteristics:** Washable, easy to iron and process
 - Quality grade: Very high

Application

As curtain, floor mat, blanket, to incorporate in furniture (bed), room divider, or with reservations for low priced clothing or bedding.

Technical data

- Width: 150 cm, +/- 2 cm
- Length: Available by the meter, 150 meter rolls
- Attenuation: 35 dB, two-layer 50 dB
- Color: Gray
- Raw materials: 40 % cotton, 30 % polyester, 30 % stainless steel
- Weight: 120 g/m²
- Surface conductivity: 100-800 ohm (square resistance R□)

Grounding

Due to the surface conductivity this fabric can be grounded to shield low frequency (LF) electric fields.

Screening attenuation

The screening attenuation is regularly tested in our own **EMC laboratory**. We have measurement setups due to the following standards: **ASTM** D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

YSHIELD®

Care



at 30°C



Iron without steam at degree 1



No drying in tumble dryers



No chemical

Cleaning with our special washing detergent TEXCARE. No handwashing! For allergy sufferers: Every new fabric smells, wash before its first usage!

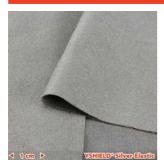
Gentle cycle

No bleaching

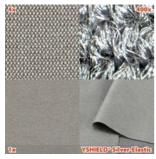


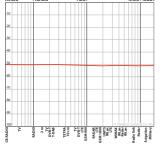
dry-cleaning

SILVER-ELASTIC - Shielding fabric (HF+LF)



YSHIELD®





Characteristics

SILVER-ELASTIC is a **compact**, **full silvered spandex fabric** for the shielding of high-frequency radiation (HF) and low-frequency electric fields (LF).

This fabric is elastic, to sew articles of clothing, please consider the **shrink** and **extensibility** rates at the "Technical data".

- High screening attenuation, especially at high frequencies!
- Contactable (groundable) to shield LF electric fields
- Textile similar characteristics: Washable, easy to process. Exception: Do not iron.
- Quality grade: Very high

Application

To sew articles of clothing. Due to the high elasticity perfect as close-fitting laundry. Actually our best apparel fabric.

Technical data

- Width: 155 cm, +/- 2 cm
- Length: Available by the meter
- Shrink after first wash: 0 % width, 0 % length
 Extensibility: 50 % width,
- 80 % length
- Attenuation: 50 dB
- Color: Silver
- This silver-fabric can discolorate and has a limited durability, more under "Information silver-fabrics"
- Raw materials: 80 % spandex, 20 % silver
- Weight: 130 g/m²
- Surface conductivity: 0.5 ohm (square resistance R□)

Grounding

Due to the surface conductivity this fabric **can be grounded** to shield low frequency (LF) electric fields.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.



30

Gentle cycle at 30°C



No ironing



No drying in tumble dryers

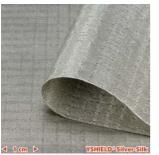


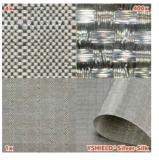
No bleaching

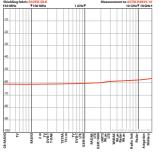


No chemical dry-cleaning

SILVER-SILK - Shielding fabric (HF+LF)







Characteristics

SILVER-SILK is a fully silvered parachute silk / nylon fabric for the shielding of high-frequency radiation (HF) and low-frequency electric fields (LF).

- Very high screening attenuation
- Contactable (groundable) to shield LF electric fields
- Textile similar characteristics: Washable, easy to process. Exception: Do not iron.
- Quality grade: High

Application

Preferable in technical applications to shield cables, handy bags, room divider, etc.. Due to the good washablity even sewable in the inside of articles of clothing.

Technical data

- Width: 130 cm, +/- 2 cm
- Length: Available by the meter, 100 meter rolls
 - Attenuation: 60 dB, two-laver 76 dB
- Color: Silver
- This silver-fabric can discolorate and has a limited durability, more under "Information silver-fabrics"
- Raw materials: 80 % nylon, 20 % silver
- Weight: 45 g/m²
- Surface conductivity: 0.2 ohm (square resistance R)

Grounding

Due to the surface conductivity this fabric can be grounded to shield low frequency (LF) electric fields.

Screening attenuation

The screening attenuation is regularly tested in our own **EMC laboratory**. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, **IEEEE Std 1128-1998, ASTM** A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C

 ${f YSHIELD}^{f g}$



No ironing



No drying in tumble dryers

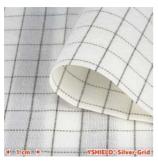


No bleaching

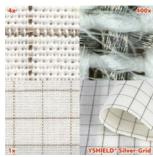


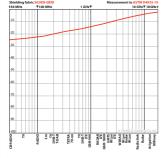
No chemical dry-cleaning

SILVER-GRID - Shielding fabric (LF)



YSHIELD®





Characteristics

SILVER-GRID is a **cotton fabric** with a silver thread for the shielding of low-frequency electric fields (LF).

Compared to a competitor product, SILVER-GRID has a tigher silver-mesh with a lower resistance for better grounding.

- Contactable (groundable) to shield LF electric fields
- Textile characteristics: Washable, easy to iron and process
- Quality grade: Very high

Application

The perfect fabric for groundable products, so-called "Earthing". For bedding, ticks, sheets, chair or floor underlays, etc.. With just 13 dB HF attenuation only limited suitable for HF shielding.

Technical data

- Width: 150 cm, +/- 2 cm
- Length: Available by the meter, 100 meter rolls
- Attenuation LF: 40 dB
- Attenuation HF: 13 dB
- Color: White
- Raw materials: 95 % cotton, 4 % polyester, 1 % silver
 Weight: 130 g/m²
- Conductivity: 15 ohm / 100 cm

Grounding

Due to the surface conductivity this fabric **can be grounded** to shield low frequency (LF) electric fields.

Screening attenuation

The screening attenuation is regularly tested in our own EMC laboratory. We have measurement setups due to the following standards: ASTM D4935-10, IEEE Std 299-2006, IEEEE Std 1128-1998, ASTM A698/A698M-07. Please find the test report at our homepage directly on the product page.

Care



Gentle cycle at 30°C



Iron without steam at degree 1



No drying in tumble dryers



No bleaching



No chemical dry-cleaning



TEXCARE - Washing detergents

Characteristics

Special washing detergents for the care of our shielding textiles with silver- and stainless steel threads.

The special recipes developed by us, preserves the shielding fabrics amd achieves the shielding attenuation on washing. Perfect cleannes and hygiene yet at 30°C.

The only authorized washing detergents we can recommend for all our shielding fabrics.
Play it safe and use it!

Background

As we made extensive washing tests with many different laundry detergens, we found out that some laundry detergents are bad for the shielding attenuation. In addition we got many customers feedback, that e.g. soap nuts would cause smell with silver fabrics. For this reasons we have developed laundry detergents together with a manufacturer of eco-detergents, that will not react with our shielding fabrics anymore.

For allergy sufferers

TEXCARE detergents not only protect our shielding textiles and the environment: They contain no fragrances, colouring agents, complexing agents, preservatives, enzymes, genetic engineering, petrochemicals, all ingredients are 100 % biodegradable.

TEXCARE - Liquid detergent

OUR RECOMMENDATION



1 liter yield for 20 loads. The dosage is independent of the water hardness. Pour 50 ml TEX-CARE per wash in the detergent drawer or put it straight in the drum. Select delecates program with washing at 30°C. Please take a note on the care label of the fabric also, respective to ironing and drying! Tip: If you wish some "fresh" smell, just add some drops of an essential oil.

Yield / Dosage / Application

Ingredients

Soap from rapeseed oil 5-15 %, sugar surfactant 5-15 %, coconut oil alcohol sulphate 5-15 %, vegetable alcohol (ethanol) 1-5 %, sulphated castor oil < 1 %, citrate < 1 %, water up to 100 %.

EC 648/2004: Aqua, Potassium Soap, Alkylpoly-glucoside C8–16, Sodium C 8–14 Fatty Alcohol Sulfate, Alcohol, Sulfated Castor Oil. Potassium Citrate.

0.000

TEXCARE - Powder detergent

OUR RECOMMENDATION



Yield / Dosage / Application

1 kg yield for 20 loads. The dosage is independent of the water hardness. Pour **50 g TEXCARE per wash** in the detergent drawer or put it straight in the drum. Select delecates program with **washing at 30°C**. Please take a note on the care label of the fabric also, respective to ironing and drying! Tip: If you wish some "fresh" smell, just add some drops of an essential oil.

Ingredients

Zeolite 15–30 %, Soap from vegetable oils 15–30 %, Citrate 15–30 %, Sugar surfactants 5–15 %, Sodium carbonate 5–15 %, Silicates 1–5 %, Sodium bicarbonate 1–5 %, Organic Quillaja <1 %, Powder humidity 10–15 %.

EC 648/2004: Zeolite, sodium soap, sodium citrate, coco glucoside, sodium carbonate, sodium silicate, sodium bicarbonate, Quillaja saponaria.



HAL - Silvered hook-and-loop fastener



Characteristics

For sewing reclosable openings in canopies, mobile pockets, shielding bags, EMC tents, intelligent clothing, etc.. Suitable for all shielding fabrics and nettings. Due to the full silvering the surface is consistently conductive with a good resistance even over the gap! Ideally, the fasteners are sewed up with our silvered sewing yarns. The reverse side is without any glue!

Technical data

- Width: 30 mm
- Length: Available by the meter, 25 meter rolls
- Highest quality from Germany due to the following certifications and approvals: ROHS, REACH, ISO 9001:2000
- Surface conductivity: 1.3 ohm (square resistance R□)
- Material: Polyamid with a 99 % pure silver plating
- Durability: Approx. 5000 x opening and closing
- Temperature resistance: 90 °C

ZIP - Silvered zip fastener



Characteristics

For sewing reclosable openings in canopies, mobile pockets, shielding bags, EMC tents, intelligent clothing, etc.. Suitable for all shielding fabrics and nettings. Due to the full silvering the surface is consistently conductive with a good resistance even over the gap! Ideally, the zip fasteners are sewed up with our silvered sewing yarns.

There is no slider included. Please order suitable sliders. **Fulda** is a classical slider with one handle. **Werra** is a turn-over slider, the handle can be used on both sides. **Illner** has handles on both sides.

Technical data

- Width: 32 mm
- Length: Available by the meter
- Highest quality from Germany due to the following certifications and approvals: ROHS, REACH, ISO 9001:2000
- Surface conductivity: 1.3 ohm (square resistance R□)
- Material: Polyamid with a 99 % pure silver plating
- Durability: Approx. 5000 x opening and closing
- Temperature resistance: 90 °C



Y300 - Silvered ply yarn



Characteristics

As a 2-ply yarn for sewing shielding fabrics and conductive nettings, if a high attenuation is needed between textile seams. Further to sew and embroider functional textiles (heatings, sensors), as antenna, conductor, etc. We ourselves use this yarn in a zigzag machine to sew on the hook-and-loop fastener HAL and sew in the zip fastener ZIP in all of our groundable textile products.

Technical data

- Lenght: 14625 LM
- Cone: 23 cm
- dtex: 300 silvered
- Resistance: 200 Ohm/m
- Tensile strenght: 34 cN / tex
- Beak elongation: 28 %
- Certifications and approvals: ROHS, REACH, ISO 9001:2000

Curtains - At no extra charge









Custom made curtains at no extra charge are especially popular among end customers. You only pay for the linear meters of the fabric! Per curtain we need and surcharge 15 cm seam. Retailers pay a small service charge, see pricelist.

Which service is for free?

1) Curtains with a heading tape on top and a lead weight at the bottom. 2) Curtains with a drawstring on top and a lead weight at the bottom.
3) Ideally, the curtains have a rectangular shape. However, we also try to sew other shapes or wishes (e.g. hook-and-loop fasteners) upon request without any extra charge! 4) Curtains with several loops are not free of charge. If you are interested, we would be pleased to make you an individual offer.

Fabric widths

Our shielding fabrics have widths from 130 cm to 260 cm. We can use the width either as height or width of a curtain. As regards width, about 8 cm will be lost due to the edging. About 15 cm will be lost in height and width. Consequently, width and height of a fabric depend on the fabric width! Example: If you want to cover an area of 400 cm (width) x 230 cm (height): 1) With Naturell you need 4.0 linear meters (LM) as the 250 cm of the Naturell are sufficient for the required height of 230 cm. 2) With Silver-Tulle you need 6.9 linear meters for 3 curtains. If you need assistance in calculating the measures of your curtain(s), we will be pleased to help you!

Front side / Back side

Some fabrics (e.g. Silver-Twin, Steel-Twin) have a light front side and a dark back side with metal threads. **By default, the light side faces the room.** Please let us know if you would like to hang the fabric the other way round.

Dimensions / Size accuracy

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We understand your stated dimensions as final dimensions (sewed curtains incl. heading tape or drawstring, hemmed edges, etc.). If you wish drapery you should add 20-50 % for the width! For most fabrics we achieve a size accuracy of +/- 2 cm. Stretchy fabrics (e.g. Silver-Tulle, Perspective) are more difficult to sew, size accuracy can be up to +/- 5 cm!

Best possible shielding

As a general point, it should be noted that **shielding as such** is more important than a **perfect optic!** 1) Curtains must cover the complete window, window sill included. In front of doors they must contact the floor! Only in this way will it be possible to achieve a continous shielding as unshielded gaps will be covered also. 2) Always cover window apertures in such a way that the walls next to them are covered as well (20-40 cm). Only if the inner wall shielding (e.g. shielding paint) overlaps with the shielding fabric you will achieve a good result. 3) If possible, curtains are to be put up with only little distance to the wall. The larger the gap, the more electromagnetic radiation may get through it.

Silver fabrics - Information

 ${f YSHIELD}^{f g}$

Discoloration

Fabrics with silver threads will discolor over time! Sometimes the fabrics are yet discolored, when we get it from the manufacturer. This process is absolutely normal for silver fabrics. The reasons for this are direct sunlight, heat from the radiator, splashes from the cleaning water, sweat, etc. Stained places have no negative effects on the screening attenuation at all and they are no quality defect! If you cannot accept any discolorations you should have a look at the list on page 1 and 2, where you will find various fabrics which are not subject to discolorations. The following are (admittedly extreme) examples of such discolorations:

Durability

Fabrics which consist of nonprotected silver threads (Silver-Tulle, Silver-Light, Silver-Twin, Silver-Elastic) show a limited stability. The life period of those fabrics is depending on the frequency of movement. Examples:

- 1) Washing: A regularly wash, at low temperature (30°C) and gentle cycle, using our washing detergent TEXCARE is without any problems for the fabrics.
 Please consider our washing test.
- 2) Curtains: Curtains made of silver fabrics will last for many years, as long as they are not drawned many times a day.
- 3) Canopies: Canopies will stay stable if they are not completely wrapped away daily, e.g. for fluffing up the feather beds. Used on daily journeys and being wrapped in a suitcase every day, your canopy will stay stable only for a few months. Alternative: Choose a canopy made of the fabric Voile, those canopies will stay stable at longest, as the silver threads are isolated and swathed. Use our blanket or a sleeping bag made of the fabric Steel-Gray for travelling.
- 4) Clothing: If you wear our hoodies/underpants made of Silver-Elastic once a week in case of emergency, they will stay stable for many years. If the hoodies/underpants are

used as pajamas it is very likely, that caused through the sweat, the fabric is spoilt within a few months. Alternative: For permanent use we recommend a blanket or underwear made of the fabric Steel-Gray. Due to its stainless steel threads this fabric will last for a long time.

Nanosilver

More and more textiles for neurodermatitis, sports textiles, etc. contain nanosilver. Due to their size, these tiny silver nano particles can penetrate through the skin into each cell. The Federal Environment Agency warns about major knowledge gaps. Thick layers of "metallic silver" on the other hand is safe for the environment and human health. All our silver varns and silvered textiles are coated with 99% "metallic silver". Even if particles should come off one day due to heavy use (e.g. clothing, bedding) they are far too big to penetrate through the skin!



Silver-Light
Hanging in the sun
for some months



Silver-Net Hanging in the sun for one year



Silver-Tulle Lying on a heater for some months



Silver-Silk Hanging in the sun for one year

Wash resistance - Information

Shielding fabrics loose their attenuation during washing and in case of movement. As there is still considerable misinformation on this, we publish here our **ninth washing test** (August 2016).

Washing and drying

We have washed all known fabrics on the market 50 times at 30°C. We did the test on two washing machines parallel (Bosch and Samsung) and averaged the results. We used our special detergent TEXCARE.

Measuring method

Measurement to standard **ASTM D4935-10**. The orange bar stands for the attenuation before washing in dB at 1 GHz. Each further bar stands for 10 wash cycles.

Conclusion

The good washing results of all our fabrics at 30°C are related to the fact, that we have removed all unstable fabrics from our product range over the years. The results with competitive fabrics (not in the diagram) are partly much worse.

For 60°C washing temperature we have 3 fabrics in our product range: Steel-Twin, Steel-Gray and Silver-Silk.

Washing tips

Washing detergent: In previous washing tests we tested different kinds of detergents (cheap, ecological, liquid, powder, etc.). Due to this detergent tests we only can recommend our own washing detergent TEXCARE,

which is the only one to preserves all fabrics best! **Drying:** The best way is to simply hang up the washing for drying. High temperatures in a dryer will destroy the fabrics. If you choose to use a dryer, you will have to keep the temperature low.

Ironing: It will be best to not iron the fabrics. If you must iron the fabric, as e.g. for Naturell which is wrinkling very much, always iron at low temperature, at degree 1, with less steam.

Result at 30°C

