Building Biology Products
and services

High and Low Frequency



- for the large-area shielding of high-frequency electromagnetic waves and low-frequency alternating electric fields
- maximum transparency and breathability, easy to assemble
- 100% textile properties
- this high-quality sheer curtain fabric creates a cosy and harmonious indoor atmosphere. It is ideal for use in bedrooms, living rooms, holiday apartments, hotels, offices, doctors' surgeries, therapy rooms, clinics, care homes, and other sophisticated commercial spaces. It is perfect for spaces where aesthetics, well-being and thoughtful design are important.
- Topas+ is an extremely light and air-permeable knitted curtain fabric that offers high- and low-frequency shielding. Its air- and light-permeability is almost 100%, preventing CO^2 build-up in canopies.

  Ultra-fine stainless steel filaments provide the shielding. This protects the fabric against mechanical stress and corrosion. Thanks to these filaments, the knitted fabric is antistatic.

  Topas+ is primarily used as a curtain fabric for windows and doors, for partial wall screening and for bed canopies and insect screens.

  Due to its fine, open weave and ultra-fine stainless steel filaments, this material may curl or change texture slightly after washing. However, this does not affect the material's functionality or sun-protective properties.

  We therefore recommend a gentle wash to avoid excessive mechanical stress. The slight creasing typical of this fabric can usually be significantly reduced by hanging the garment up while it is still damp and gently stretching and steaming it.

Shielding knitted fabrics (curtains, blinds, canopies)

Topas+

Type	MHz	dB	in %
LTE / 5G wide	700 - 750	**34**	**> 99,9**
LTE	790 - 820	**33**	**> 99,9**
GSM, LTE	920 - 960	**32**	**> 99,9**
5G wide	1450-1500	**30**	**~ 99,9**
GSM, LTE	1.800 - 1.880	**29**	**> 99,0**
DECT	1.880 - 1.900	**28**	**> 99,0**
LTE, 5G wide	2.110 - 2.170	**27**	**> 99,0**
W-LAN 2400	2.400 - 2.500	**26**	**> 99,0**
LTE	2620 - 2690	**25**	**> 99,0**
5G fast	3.400 - 3.700	**22**	**> 99,0**
W-LAN 5200	5.150 - 5.350	**18**	**> 98,0**

Technical data

length:	by the meter
width:	255 cm ± 2 %
thickness:	0.25 mm ± 10 %
color:	white
grammage:	about 70 g/m²
mesh gauge:	about 1 mm x 1 mm 3/4-transparent
composition:	80 % polyester 20 % metal
features:	**can be grounded**, highly corrosion-resistant, excellent transparency, excellent air exchange, high shielding attenuation, antistatic, UV-resistant
basis for inspection:	IEEE Standard 299™-97
shield attenuation:	1-layer - max. **34** dB (> **99,9** %) 2-layer - max. **48** dB (> **99,99** %)

Care instructions



Hand wash only at a maximum temperature of 30°C.
(Do not wring or spin dry)



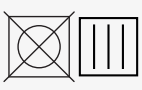
or wash very gently
(delicate or wool wash cycle at 30°)



gentle ironing at level 1
(ironing at a low temperature)



bleaching not permitted
No detergent with bleach

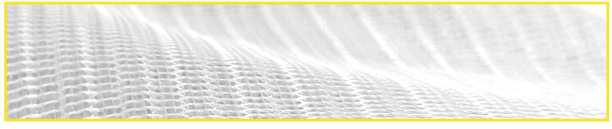


do not tumble dry
Smooth it out while it is still damp and let it dry while hanging up.
(Gentle steaming can reduce the wrinkles that are typical of this material.)



do not dryclean

Order-No.: 100345
Short-Desc.: Topas+ - 255 cm

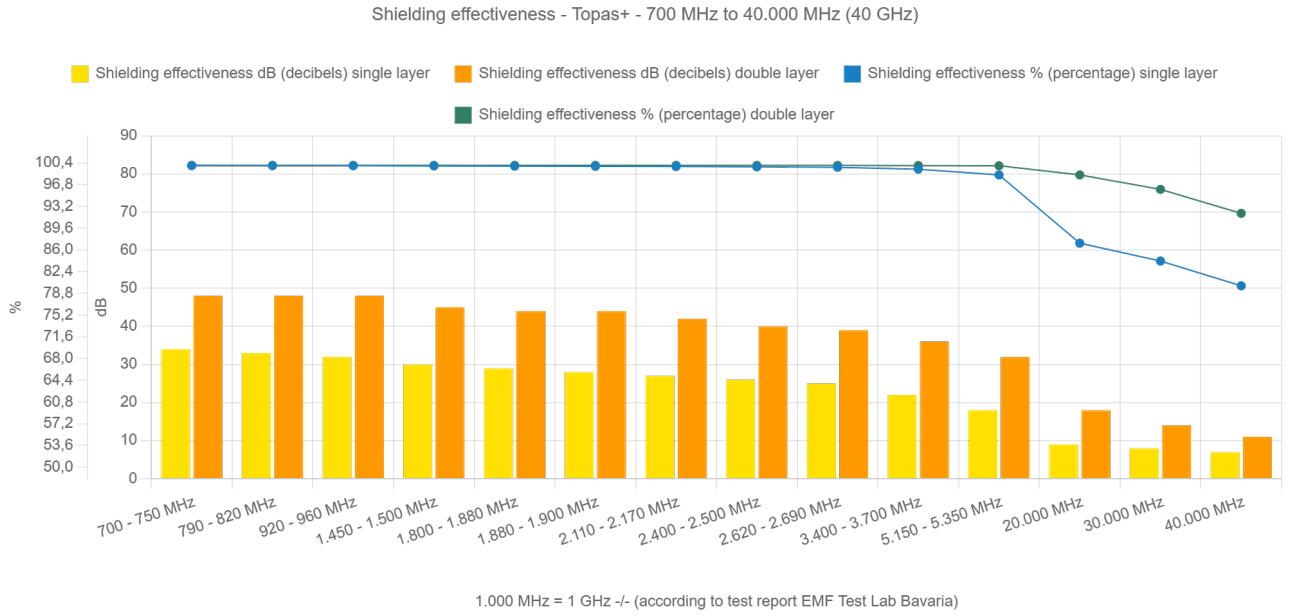


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Further information at www.biologadanell.com

Type	MHz	Description
LTE / 5G wide	700 - 750	from 4G, now 5G NR without beamforming / MIMO
LTE	790 - 820	from 4G
GSM, LTE	920 - 960	from 2G - D1, now 5G NR without beamforming / MIMO
5G wide	1.450-1.500	5G NR without beamforming / MIMO
GSM, LTE	1.800 - 1.880	from 2G - D2, E network, now 5G NR without beamforming / MIMO
DECT	1.880 - 1.900	wireless phone
LTE, 5G wide	2.110 - 2.170	from 3G, formerly UTMS, now 5G NR without beamforming / MIMO
W-LAN / WiFi 2400	2.400 - 2.500	wireless LAN
LTE	2.620 - 2.690	5G above 3 GHz with MIMO and active beamforming.
5G fast	3.400 - 3.700	5G NR - New frequency band with beamforming / MIMO
W-LAN / WiFi 5200	5.150 - 5.350	wireless LAN

- Shielding values: According to test report: EMF Test Lab Bavaria



1.000 MHz = 1 GHz -/- (according to test report EMF Test Lab Bavaria)

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