

# SHIELDING CANOPIES

## MADE FROM AARONIA SHIELD®

50dB

High performance RF shielding-canopies made from a patented high-tech shielding-fibre



- "...especially effective against all high-frequency radiation up to far beyond 10GHz"
- "...ensures conformance with rigorous architecture-biological exposure limits.."
- "...offers a 30 to 1000 fold more efficient screening than similar products on the market"
- "...particularly well-suited for people with allergies!"  
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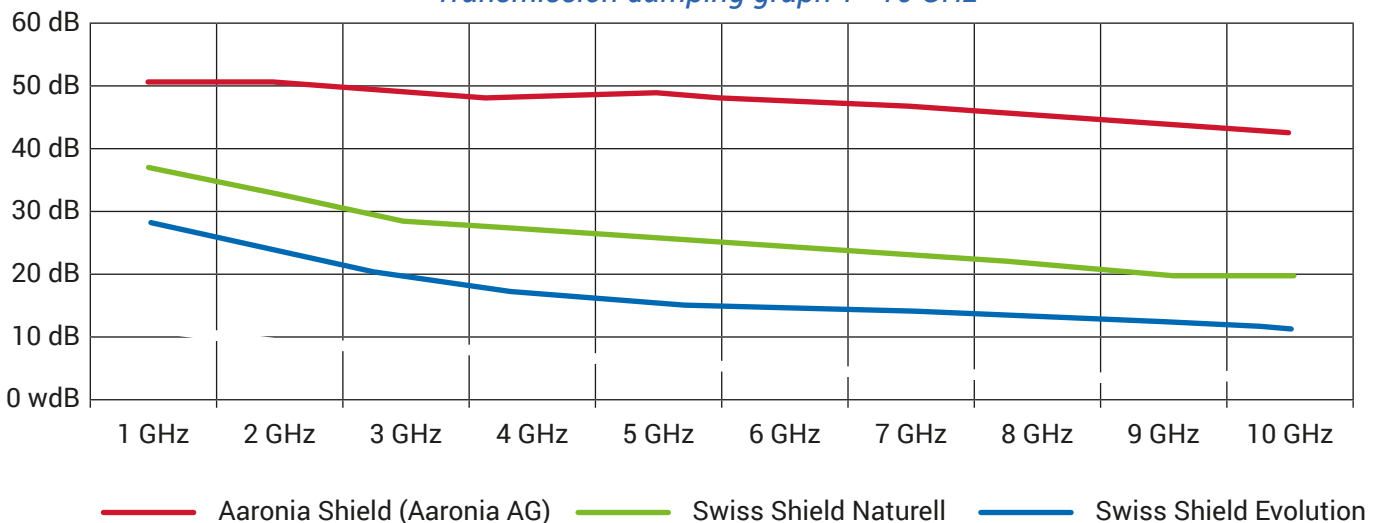
MADE IN GERMANY

# Specifications

## Aaronia Shielding Canopies made from Aaronia Shield®

Thickness	0,5mm	<ul style="list-style-type: none"> <li>• Extremely breathable</li> <li>• Extremely transparent</li> <li>• Anti-septic</li> <li>• Washable</li> <li>• Foldable</li> <li>• Easy to handle even for the novice</li> </ul>
Mesh size	approx. 5mm	
Colour	Silver	
Weight	approx. 40g/m <sup>2</sup>	
Mesh material	silver/polyamid compound	
Screening efficiency static fields	99,99% to 99,999% (only with grounding)	
Screening efficiency low-frequency, electric fields	99,99% to 99,999% (only with grounding)	
Screening efficiency radio frequency fields	43dB (99,992%) at 10GHz and 50dB (99,999%) at 1GHz	
	(even without grounding)	

Transmission damping graph 1 - 10 GHz



Tests according to MIL-STD-285 approve the superior screening performance of our canopies due to the consequent deployment of Aaronia-Shield®. The RF (high-frequency) radiation damping performance, especially in the frequency range where pulsed signals from cell towers etc. are present, is an exceptional 43dB (99,992%) to 50dB (99,999%). Compared to canopies made from the other products shown, canopies made from Aaronia-Shield® offer 30 to 1000 times better protection! Apart from this, canopies made from Aaronia-Shield® can also be grounded and thus even protect against static and low-frequency EMF, which is generated by virtually all cables running through homes, all home appliances and also high-voltage power lines.

### Damping specifications for Aaronia high-performance shielding products

Product	Frequency	Damping (dB)	Damping factor	Damping (%)	Application examples
Aaronia A2000+	1 GHz - 10 GHz	20 dB - 10 dB	100 - 10	99,0% - 90%	Indoor and outdoor shielding, low exposure
Aaronia-Shield	1 GHz 10 GHz	50 dB 45 dB	100.000 30.000	99,999% 99,992%	Textile applications (Canopies, protective suits, curtains, etc.) Low and high exposure
Aaronia X-Dream	1 GHz 10 GHz	100 dB 80 dB	10.000.000.000 100.000.000	99,999.999.99% 99,999.999%	Indoor shielding, measurement chambers High to highest exposure

Notice: when using the dB unit, an increase of 10 dB is equivalent to a 10fold increase in strength. For example, 100 dB is 10 times as strong as 90 dB, or 100 times as strong as 80 dB, etc.

# Description

## Shielding canopy made from Aaronia-Shield®

Thanks to the special weaving technique, the Aaronia canopy systems are characterized by a high shielding performance in the low to high GHz range and can also shield low-frequency electrical fields. This requires grounding of the system, which can be done easily and uncomplicatedly with the grounding package supplied with the matching floor mat. Responsible for the very good shielding effect is a complex fabric concept based on a patented silver/polyamide special fiber.

Aaronia canopies are air-permeable and the optics are highly transparent and translucent. The silver/polyamide special fiber ensures good air exchange. The material is antiseptic and therefore extremely allergy-friendly. It is always recommended to purchase canopies as a system, i.e. a canopy with a matching floor mat. Since our shielding fabric reflects incoming radiation, a Faraday cage should always be created to shield

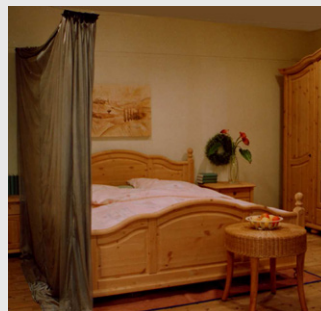
high-frequency signals. This can be achieved relatively easily with our canopies and floor mats.

Canopies made of Aaronia-Shield® do not need to be grounded for high-frequency shielding. However, we generally recommend grounding in connection with the respective shielding mat, since this shields low-frequency electrical fields from power lines, high-voltage lines, etc., on the one hand, and for safety reasons on the other hand, since the materials are electrically conductive and can become statically charged.

The canopies should be washed by hand without bleach and without spinning and/or wringing out to avoid damage and mechanical effects on the fabric. Careful shaking out is recommended for the matching floor mats. Excessive friction and force on the fabric should be avoided.



Rectangle shielding canopies made of Aaronia Shield® offer maximum shielding against LF and HF loads



Simply practical: Aaronia rectangle canopies can be „pushed to the side“ in a few easy steps



Shielding mat made of Aaronia X-Dream®

## Application / installation

Aaronia offers a suitable shielding system with its canopy systems, consisting of a canopy with matching floor mat. When purchasing, please make sure to order both items separately. They are not automatically delivered together.

To shield the floor, the shielding mat, which is made of our shielding fleece Aaronia X-Dream®, is laid under the bed. Any creases and folds in the material will disappear over time. Shielding the floor area is strongly recommended, since HF radiation also occurs here. When the shielding mat is delivered, two different grounding cables are included: a shielding cable for connection to a radiator or similar and, if no radiator is present, a cable for direct connection to the potential equalization of the socket. The connection to the shielding mat is made with a so-called “alligator crimps” of the respective grounding cable, which is clamped to the mat. The grounding of the mat and the canopy lying on

the mat also provides a shield against low-frequency electrical fields.

Besides a good air exchange the canopy also offers additional protection against mosquitoes and flies.

For permanent installation in the room we recommend our rectangle canopies. Due to the straight construction of the sides of the canopy, the fabric does not fall across the bed and the danger of the canopy being pulled into the bed at night is minimized. Also the canopy offers more space inside without touching the canopy with your head. The canopy is suspended using two supplied rope tensioning sets, which are tensioned over the head and foot ends of the bed.

Spreading canopies, on the other hand, are well suited for mobile use, as they are suspended from the ceiling by only one hook.

# REFERENCES



## Selected Aaronia Clients

### Government, Military, Aeronautic, Astronautic

- **NATO**, Belgium
- **Department of Defense (DoD)**, USA
- **Department of Defence**, Australia
- **Airbus**, Germany
- **Boeing**, USA
- **German Armed Forces**, Germany
- **NASA**, USA
- **Lockheed Martin**, USA
- **Lufthansa**, Germany
- **German Aerospace Center (DLR)**, Germany
- **Eurocontrol**, Belgium
- **EADS**, Germany
- **Drug Enforcement Administration (DEA)**, USA
- **Federal Bureau of Investigation (FBI)**, USA
- **Federal Criminal Police Office (BKA)**, Germany
- **Federal Police**, Germany
- **Ministry of Defence**, Netherlands

### Research/Development, Science and Universities

- **MIT - Physics Department**, USA
- **California State University**, USA
- **Indonesian Institute of Science (LIPI)**, Indonesia
- **Los Alamos National Laboratory (LANL)**, USA
- **University of Bahrain**, Bahrain
- **University of Florida**, USA
- **University of Victoria**, Canada
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- **University of Durham**, United Kingdom
- **University Strasbourg**, France
- **University of Sydney**, Australia
- **University of Athen**, Greece
- **University of Munich**, Germany
- **Technical University of Hamburg**, Germany
- **Max-Planck Inst. for Radio Astronomy**, Germany
- **Max-Planck Inst. for Nuclear Physics**, Germany
- **Research Centre Karlsruhe**, Germany

### Industry

- **IBM**, Switzerland
- **Intel**, Germany
- **Shell Oil Company**, USA
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- **Microsoft**, USA
- **Motorola**, Brazil
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- **BMW**, Germany
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