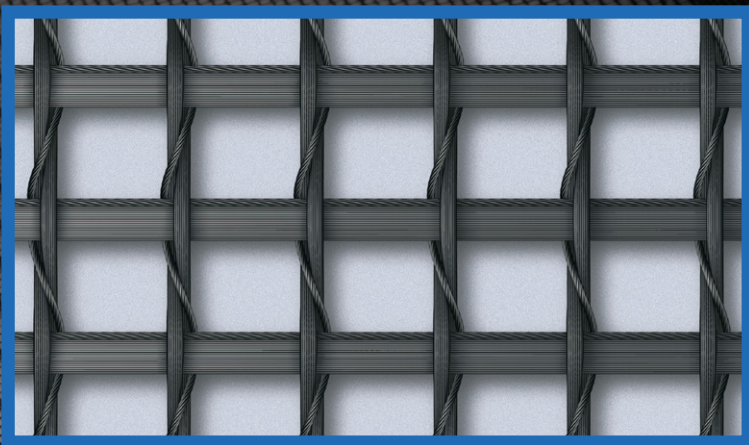


# AARONIA A2000+ ---

# RF SCREENING TISSUE ---

20dB

Reduces RF emissions from mobile phones, microwave ovens etc.



## References:

- CERN, Switzerland
- University Munich, Germany
- University Hannover, Germany
- Bayer Industry, Krefeld, Germany
- EnBW, Karlsruhe, Germany



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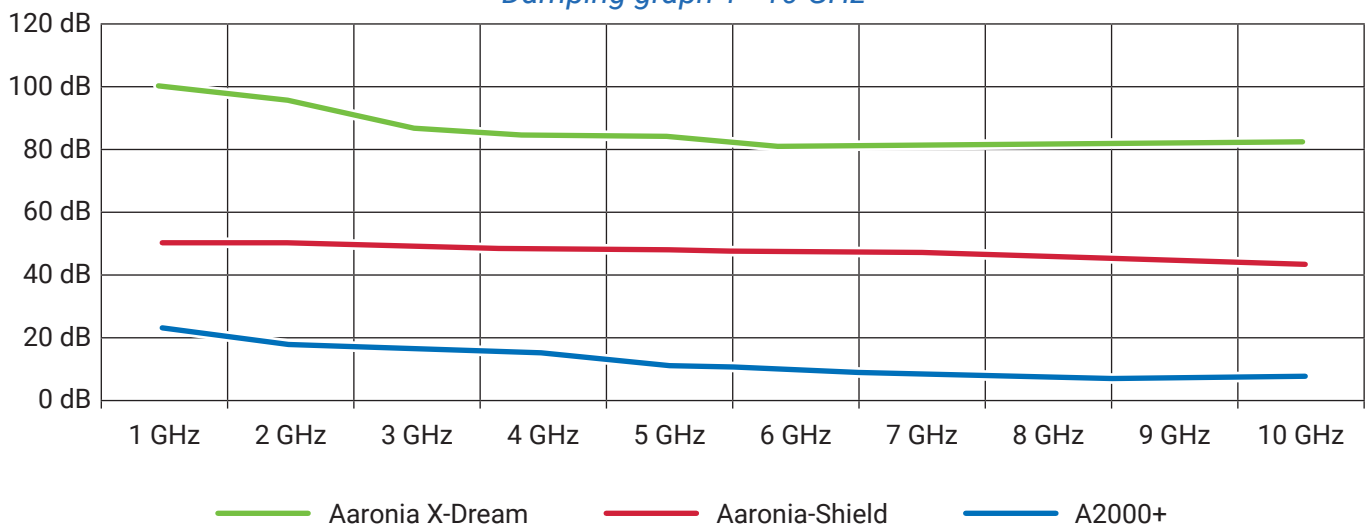
**MADE IN GERMANY**

# Specifications

## Aaronia A2000 +

Length per unit	5 m, 10 m or 50 m	<ul style="list-style-type: none"> <li>Breathable</li> <li>Rot resistant</li> <li>Frost-proof</li> <li>Foldable</li> <li>Paintable</li> <li>Usable in walls or concrete</li> <li>Replaces reinforcement fabric</li> <li>Very easy processing even for the novice</li> </ul>
Width	1 m	
Thickness	0,5 mm	
Mesh size	ca. 5 mm	
Colour	black	
Weight	approx. 200 g/m <sup>2</sup>	
Mesh material	Stainless steel	
Quality assurance	TÜV CERT according to ISO 9001	
Screening efficiency static fields	99,5 % to 99,95 % (only with grounding)	
Screening efficiency low-frequency, electric fields	99,5 % to 99,95 % (only with grounding)	
Screening efficiency radio frequency fields	90 % to 99 % (even without grounding)	

Damping graph 1 - 10 GHz



Measurements prove the good screening performance: Damping of high-frequency radiation in the frequency range particularly affected by pulsed signals, for example by cell towers, is 90% to 99%. Also, static and low-frequency electric fields like those generated by any cables or appliances in homes, or high-voltage power lines, are being damped by up to 99,9%.

## 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

## Application

Aaronia offers an inexpensive and easy to handle shielding, even for the layman: The Aaronia shielding fabric A2000+. Aaronia's shielding fabric A2000+ simultaneously offers protection against high-frequency (HF) and low-frequency (LF) E-field radiation.

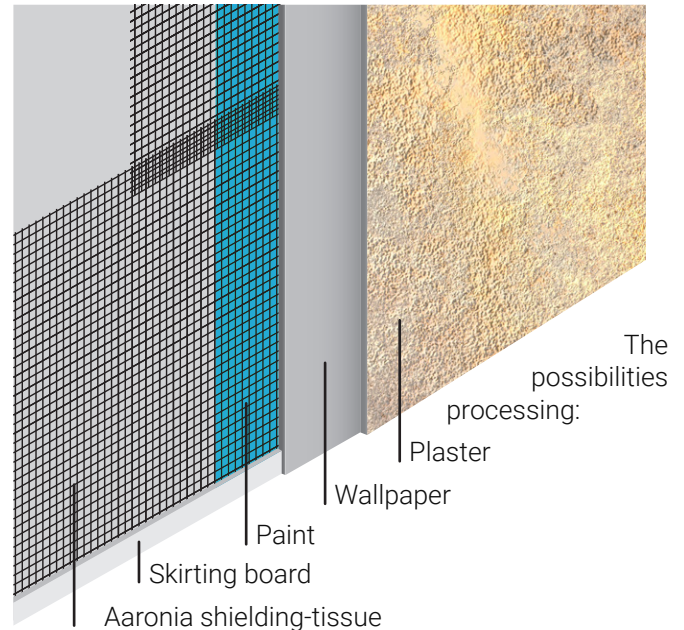
Responsible for the good shielding effect is a fabric concept based on interwoven stainless steel threads and a special conductive coating. The fabric is easy to handle and install. It can be bent or folded without damage, is tensile strength, frost-resistant, does not rot, is breathable and can even be laid in plaster or concrete. It is therefore also suitable for outdoor use and replaces the regular reinforcement fabric.

The Aaronia shielding fabric A2000+ can be used to shield local radiation sources such as cables or power distribution boxes as well as rooms or entire houses and buildings. It is laid in adjacent strips, which should overlap by approx. 15 cm to create a closed surface. For high-frequency shielding, the material does not need to be grounded! However, for safety reasons, we generally recommend grounding with our "grounding package", since the fabric is conductive due to the metals it contains. In addition, low-frequency electrical fields, such as those from power lines or high-voltage lines, are also reduced at the same time.

## Shielding a house or other building

It is recommended to shield the exterior of houses and buildings in new construction. In this case, the fabric is installed in the plastering of the walls as a replacement for the reinforcement fabric. In the roof area, the fabric can be installed directly below the vapour barrier foil. In the floor area, the fabric is laid in the screed of the floor slab.

It should always be noted that for the best possible RF shielding, a closed surface, i.e. a Faraday cage, must be formed! When laying the panels in the walls, floor slab and roof area, always leave the corresponding overhangs of the fabric in order to be able to connect the panels without gaps later.



## Protecting a room

To shield a room against high-frequency radiation, it must be completely lined with the fabric. If, on the other hand, a low-frequency E-field radiation source (e.g. the power distribution box or cables in the wall) is to be shielded, only a small area around the radiating source must be covered with the fabric.

Attention: With low-frequency shielding, the fabric must also be grounded! We recommend our Aaronia "grounding package" for this purpose. In the floor area, the fabric can be laid in the floor screed. When installing indoors, the fabric should be processed in the wall (see diagram). Due to its structure and the coating, the material is not suitable for painting or wallpapering over it!

When screening the interior, if the walls are made of plaster, wood or similar, the fabric can be applied with a "stapler". It can also be laid on the ceiling. Doors, on the other hand, should be covered with the shielding fleece Aaronia X-Dream®, as should the door frame. When the door is closed, this creates an almost seamless connection with the rest of the room's fabric. In the window area, for example, our shielding fabric Aaronia-Shield® or Aaronia Shield® Ultra can be used. Installation instructions are included in the delivery.



# 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
- University of Newcastle, United Kingdom
- 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
- ATI, USA
- Microsoft, USA
- Motorola, Brazil
- Audi, Germany
- BMW, Germany
- Daimler, Germany
- Volkswagen, Germany
- BASF, Germany
- Siemens AG, Germany
- Rohde & Schwarz, Germany
- Infineon, Austria
- Philips, Germany
- ThyssenKrupp, Germany
- EnBW (Energie Baden-Württemberg), Germany
- CNN, USA
- Duracell, USA
- German Telekom, Germany
- Bank of Canada, Canada
- NBC News, USA
- Sony, Germany
- Anritsu, Germany
- Hewlett-Packard, Germany
- Bosch, Germany
- Mercedes-Benz, Austria
- Osram, Germany
- DEKRA, Germany
- AMD, Germany
- Keysight, China
- Infineon Technologies, Germany
- Philips Semiconductors, Germany
- Hyundai Europe, Germany
- VIAVI, Korea
- Wilkinson Sword, Germany
- IBM Deutschland, Germany
- Nokia-Siemens Networks, Germany

  
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