# **AARONIA AG**HIGH-EFFICIENCY SHIELDING



#### **FUNDAMENTAL PRINCIPLES**

The Aaronia screening fabric protects against LOW-FREQUENCY (LF) fields as well as against HIGH-FREQUENCY (HF) fields. LF fields are emitted from all mains cables and practically every electrical appliances (fridge, electric cookers, computers, TV sets, lamps etc.) connected to them as well as from high--tension cables. HF fields are emitted from mobile phones, mobile phone transmission masts, radar equipment, Bluetooth transmitters, DECT telephones but also from various computers, monitors or low-energy lamps. If you want to shield HF fields you don't have to ground the Aaronia shielding fabric, if you want to shield LF fields you need to ground the Aaronia fabric. It is vital that you use our grounding package to comply with the rules and regulations!

# **INSTALLATION**

Always use the fabric in adjoining strips that need to overlap by ca. 15cm so that you create one single unit. It is very easy to apply to walls and ceilings: the preferred method is to use a "Tacker". If the surface is not suitable (ie concrete or brick), you may use cheap adhesive, for instance "fabric glue". You can get this glue at any builders providers (one bucket covering  $25m^2$  costs approximately 15 euro). Putting it under plaster is no problem either. Just make sure that the individual strips are joined by overlapping. After installation the fabric may be painted or covered with wallpaper.

# GROUNDING/INSTALLATION OF THE "GROUNDING PACKAGE"

It is vital that you use our grounding package in order to meet the regulations. The enclosed earthing tape should preferably be joined at regular intervals to the Aaronia fabric at the base using the enclosed bonding aid. The earthing tape may be shorted if necessary or indeed lengthened using the eyes punched into it, thus jointing several grounding packages. In order to ground the screen you simply fasten an earth conductor in turn needs to be connected to the potential balance.

# Caution!

For reasons of personal safety screens must only be connected to installations with an FI protector switch. Shielding materials must be grounded by authorized expert personnel only. We do not accept liability for damage caused by falsely installed equipment or grounding.

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## SHIELDING A ROOM

In order to shield a room it must be covered seamlessly with Aaronia screening fabric in order to create a "Faraday cage". But if you wish to protect against localized LF fields only a small area around the source of radiation needs to be covered by the Aaronia fabric (you need to gauge the effect). Remember to ground the fabric afterwards. Again, it is vital you use our "Grounding Package".

#### Doors:

Doors should be covered with the Aaronia fabric in their entirety. That also applies to the door frame. This means that when the door is closed there is a seamless connections to the remaining Aaronia fabric of the room.

### Windows:

The Aaronia Shield fabric is brilliantly suitable to serve as a nearly invisible "fly screen". Because the fabric can be rolled up it can be used for roller blinds which, when pulled down, protect the windows.

## SHIELDING A HOUSE OR A BUILDING

Houses an buildings should be screened, if possible, from the outside. The armour fabric gets replaced by the Aaronia fabric in the external plasterwork saving enormous amounts of money. If outside use is not possible, each room needs to be screened individually. In the roof space the Aaronia fabric should be installed immediately underneath the vapour-barrier membrane. In floor areas the Aaronia fabric is laid into the self-levelling compound of the base plate. Remember to always make sure that, in order to provide the best possible HF shielding, you need to achieve a scaled area! Therefore make sure that you allow suitable overlapping during the installation of the Aaronia fabric on walls, foot plate and in the roof space to ensure seamless joints!

### **CAUTION!**

In order to be able to check the screening efficiency it is vital that you use a high-quality measuring instrument! It is the only way to judge the efficiency of the screening and to detect gaps or faulty earthing. We recommend you use the "SPECTRAN NF" for LF/EMF fields and our "SPECTRAN HF" for HF fields. In order to assess both we recommend our tried and tested "PRO-Bundles"