

Instructions GPA mesh

Quick facts:

GPA is a fibreglass mesh with metal woven through it and coated in Geovital's T98 Alpha shielding paint. GPA is used to reduce electromagnetic high frequency (RF) radiation exposure in buildings from common sources like mobile phone towers, Wifi, smart meters, cordless phones, radar, airport navigation systems and others. It can also be utilised to shields against low frequency electric fields often produced by internal wiring.

GPA can be applied on walls, ceilings and potentially flooring:

- As reinforcement mesh in ETIC systems
- As reinforcement mesh in rendering
- Under timber cladding
- Placed inside wall, ceiling and flooring structures
- Placed under carpet

GPA provides effective shielding against electronic pollution. It can achieve an attenuation of over 99% of high frequency (RF) radiation and reduces low frequency electric fields dramatically. It is both Alkali-resistant and has a high tensile strength.

Electrical Shielding Properties:

Prof. Dipl. –Ing. P. Pauli, German Armed Forces University Munich.
Section: RF- and Microwaves, Radars

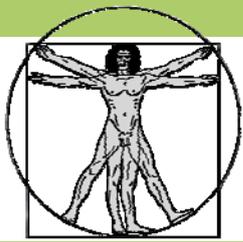
“The shielding fabric GEOVITAL GPA presents a shielding effectiveness of 30dB in the most interesting frequency range of GSM 900 (at 900MHz). 30dB shielding means a reduction of the transmitted power down to a factor of 1:1000. This promises very good shielding, assumed, the shielding material is mounted correctly: This means no wholes or slots in the fabric and an overlapping of 5cm between two adjacent layers of the fabric.”

For Low Frequency electric fields and electrostatic fields: Reduction between 99.4% to 99.94% to a residual field strength of only 0.6% to 0.06% compared to the external load. The attenuation is independent of the polarisation of the waves. Inside a closed room mobile phone use (signal strength) may be affected.

Coverage:

Taking the width of 100cm and the recommended overlapping between 3-10cm in account, the needed length is approx. 1.1meter per M².





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Application:

The application of GPA is identical to that of a conventional reinforcement mesh for external plaster. When plastering the GPA mesh must be pressed into the fresh reinforcement compound without bubbles or wrinkles and then smoothed over with filler.

With ceiling/roof shielding or for use within timber walls, the overlapping strips of GPA are secured with staples. The edges of the GPA mesh must overlap.

If the fabric is cut to make openings for scaffolding anchors for example, the opening will have to be covered by an additional GPA mesh strip/panel.

Connection of the Grounding:

The panels of GPA Mesh need to be connected to ground. This can be achieved in different ways. The use of metal hole band normally proves to be a good option. The hole band can be nailed into place across the GPA panels and therefore connecting them. The hole band can then be connected to ground in one location and effectively grounding all attached panels.

The ground wire, hole band or perforated tape is, after preparation, connected to ground by a qualified electrician in accordance with local regulations.

When applying hole band to timber frame work which is later going to be covered by plasterboard, it is a good idea to prepare a small recess for the hole band to sit in. (a bit like preparing timber frame work for the fitting of a cross brace) This would prevent the hole band from being a raised area on the framework and perhaps showing through the plaster. Be mindful that the recess should be flat and smooth to not reduce the amount of contact the hole band will have with the GPA Mesh.

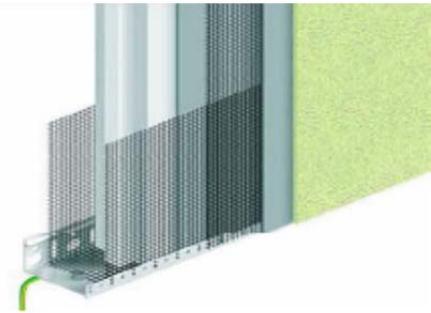
Surface weight VIAS 003 (internal) > 180g/M²

Mesh size VIAS 001 (internal) 5x5mm

Tensile strength in delivered condition EN ISO 13934-1 > 1750 N/50mm

Tensile strength after storage in 5% NaOH 28d EN ISO 13934-1 > 850 N/50 mm

Tensile strength after storage for 6 hours at 80 ° C in solution with pH 12.5 EN ISO 13934-1 > 750 N/50 mm including stainless steel threads and special conductive coating weft to weft x warp to warp and subsequent washing / drying.



These instructions should be complied with! Due to the possibility of radiation sources changing, possible incorrect application of the GPA Mesh, the grounding, including the professional grounding and the HF shielding for the windows, Geovital Akademie/Geovital Academy cannot guarantee the level of effectiveness.

We have always been patient and health recovery focussed because your long term health improvement and protection should be the goal. This core belief shines through in our services, training, superior products, durable results and a great reputation. You're in good hands with Geovital.

