



Absorber Lining

For the selection of the absorber material several things must be considered; the frequency range that have to be covered (including the requirements regarding chamber performance), the size of the place of installation as well as the respective costs.

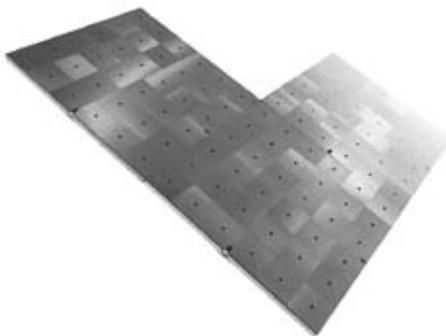
You can choose ferrite, pyramid or hybrid absorbers.

The following differences between the absorber types must be taken into account:

- **Reflectivity over a defined frequency range**
- **Dimensions (length) and consequently the space required**
- **Cost**



Ferrite absorber panel



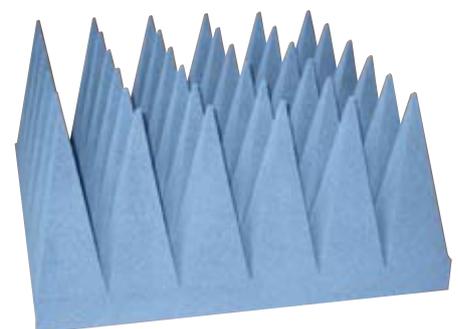
Ferrite Absorbers

An important advantage of ferrite absorbers is the fact that, despite their small thickness, they offer very good reflection attenuation characteristics starting already from a frequency of 30 MHz, thus being perfectly suitable for the use in smaller rooms. The biggest disadvantage however, is the relatively high price as well as the limitation of frequencies up to 1 GHz.

Ferrite absorbers should be considered in all the cases where pyramid absorbers cannot be used due to limited space. An extension of the frequency range up to 18 GHz can be achieved by using a combination of ferrite absorbers with short pyramid absorbers (see hybrid absorbers).

Pyramid Absorbers

Pyramid absorbers are available in sizes (lengths) of 100 mm to 2.500 mm. The required length depends mainly on the wavelength of the lowest usable frequency specified for the anechoic chamber. The length decreases with increasing frequency. Pyramid absorbers of a size of ≥ 2.000 mm are mainly used in chambers with measuring distances of up to 10.0 m where the requirement for NSA correlation of better than ± 4 dB has to be fulfilled from 30 MHz to 1 GHz. In tests with frequencies starting at 80 MHz (e.g. in immunity tests according to IEC/EN 61000-4-3) the respective requirements can be fulfilled already with a pyramid length of 75 cm. For measurements in the range ≥ 1 GHz, even sizes of 200 to 300 mm are sufficient. Compared to ferrite absorbers, the pyramid absorbers offer the considerable advantage of lower price (depending on size), lower weight and their practically unlimited use up to the high GHz range.



Foam pyramid absorbers