

# The topical subject

## Radiation shielding

### AURO Safe Shield No. 332



#### Why use a shielding paint?

The dark paint serves as a kind of prime coat for interior surfaces that reduces incoming radiation of electromagnetic waves (high frequency) and alternating electrical fields (low frequency).

There are two main purposes of application for a shielding paint, the first one being the shielding against or attenuation of external waves and also the exclusion of waves from defined internal areas.

Shielding against external waves is mostly necessary in cases where strong radiation sources are present in the immediate vicinity of the building. As a consequence, inhabitants may develop a certain discomfort that is ascribed to source of radiation. In this case, the wall facing towards the source of radiation or part of that wall can be coated to achieve a reduction of the incoming radiation. Afterwards, the wall should be treated with a final wall paint application in any desired colour tone.

The second field of application encompasses special solutions that are mainly asked for in trade and industry but may also be desired in private homes, i.e. in cases where unwanted interferences in buildings or building complexes have to be reduced or completely prevented. This may be the case where clearly separated signals are requested or where WLAN systems are interfering with each other.

Another field of application can be the area between warehouse or goods inwards of a retail business and the adjacent sales room. Nowadays, most retail products are identifiable by means of RFID labels and can thus be assigned to particular inventory control systems. In order to clearly separate the stock of products within these inventories, it can make sense to avoid interferences by application of a shielding paint.

#### Description of Safe Shield

Safe Shield is a special paint that combines the graphene technology with its electrically conductive carbon particles and AURO's biogenic binding agent Replebin®. The use of these particular ingredients provides an ecological paint and an effective attenuation of electromagnetic waves (high frequency) and alternating electrical fields (low frequency). AURO Safe Shield reaches a shielding effect up to 31 dB, provided that two coats have been appropriately applied. This is equivalent to the shielding of 99,9 of the incidental radiation.

#### How does Safe Shield work?

Safe Shield can be applied like a normal wall paint with a shortpile roll on all usual interior wall surfaces, mineral or organic. Two thin coats provide for the required shielding effect. Allow for at least 6 hours drying time between coats.

In order to increase the durability of the coating, the surface should be coated with wall paint. This can be done after 24 hours with any wall paint from the AURO range of products. We particularly recommend the product. Ecolith Interior lime, white (No. 341).



## Important note - the grounding of the coating

**Attention:** AURO Safe Shield No. 332\* is a conductive coating product that, in terms of electrical engineering, constitutes a voltage field that therefore needs a ground connection. The grounding of such voltage fields is subject to specific regulations. In Germany these are the DIN VDE provisions, in other countries please check which rules and regulations apply.

High frequency electromagnetic fields (radio waves) are reflected without an existing grounding. Voltage fields that accumulate in the coating, however, cannot be discharged. Therefore, a grounding is indispensable and it has to be done in cooperation with certified expert staff, e.g. an electrician. Please ask your local specialised company and, where necessary, also consult a building biologist.

## Certified quality

The GAF university in Munich has stated in an extensive report that AURO Safe Shield reaches a shielding effect up to 31 dB within the measuring range of 100Mhz to 8Ghz, provided that two coats have been appropriately applied.

More information, the complete report and an article on the new graphene technology can be found on [www.auro.de/en](http://www.auro.de/en).

For more information on AURO Safe Shield No. 332, please consult the [Technical Data Sheet](#).



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