

# ElectroShield

Priming coat to reduce low- and high frequency electro-magnetic pollution (electric smog) in interiors.



## Product Description

### Field of Application

Black pigmented, special electroconductive coating product with a shielding effect. For the reduction of alternating electrical fields (low frequency) on large surface areas in interiors, such as alternating voltage in electric cables, installations, equipment, walls, etc., and electromagnetic waves (high frequency), caused by e.g. transmitters, radar, radio link systems, mobile (cell) phones, wireless phones, etc.

Particularly suitable for use in sensitive areas, such as nurseries, bedrooms, living- or hotel rooms, offices, hospitals, sickrooms and surgeries, play schools, schools, etc.

### Material Properties

- Electroconductive, reduces over 99.5 % of radiation.
- Emission-minimised, solvent-free.
- Water-dilutable, ecologically compatible, low odour.
- Enhances adhesion.
- Water vapour permeable.
- s<sub>d</sub>-value < 0.1 m

### Material Base / Vehicle

Synthetic resin dispersion/emulsion according to German standard DIN 55945.

### Packaging/Package Size

5 litres, 12.5 litres

### Colours

Black

### Storage

Keep in a cool, but frost-free place. Shelf life: Approx. 12 months.

### Technical Data

- Density:     Approx. 1.35 g/cm<sup>3</sup>

### Supplementary Product

Disbon 973 Kupferband (copper strip)

Suitability according to Technical Information No. 606 Definition of Application Areas

Interior 1	Interior 2	Interior 3	Exterior 1	Exterior 2
+	+	○	-	-
(-) inapplicable / (○) of limited suitability / (+) suitable				

## Application

### Suitable Substrates

The substrate must be sound/stable, dry, clean, and free from all substances that may prevent good adhesion. In Germany: Follow VOB, part C, DIN 18363, section 3.

### Substrate Preparation

Concerning the suitability on different substrates and their necessary pre-treatments, please see our Technical Information No. 650 "Substrates and their Preparations".



Method of Application	Apply an even coat of ElectroShield liberally with a paint roller, then roll evenly in one direction (directly, wet-on-wet) using a coarse texturing polyester foam roller. By this means a slight orange-like texture is obtained. The surface can be smoothed by a subsequently applied fine filler coat of Caparol-Akkordspachtel. ElectroShield is ready for use, stir well before application. Clean tools immediately after use with water.
Surface Coating System	Affix Disbon 973 Kupferband (self-adhesive copper strip) with enough excess length (for ground connection) approx. 20 cm nearby electric sockets, in the zone intended for earthing/grounding. Press on and, if necessary, degrease with a synthetic resin thinner. Apply undiluted ElectroShield in two worksteps/coats. Observe a drying time of approx. 12 hours between coats. Prime the copper strip area with Capacryl Haftprimer or Capalac Isolierspray after having finished ElectroShield applications.  <b>Finishing Coat:</b> ElectroShield can be coated with CapaSan, Caparol-Sensitive or all other Caparol emulsion or latex paints and can be pasted over with woodchip/ingrain wallpaper, glass fabrics, Capadecor AkkordVlies (fleeces) or other types of wallpaper, synthetic (organic) plaster, etc.
Consumption	Minimum 2 x 160 ml/m <sup>2</sup> on smooth substrates. This leads to a dry film thickness of approx. 145 µm, on an average. On roughly textured surfaces correspondingly more. Determine the exact amount of material required by coating a test area on site.
Application Conditions	<b>Lower Temperature Limit for Application and Drying:</b> +5 °C for product, substrate, and ambient air.
Drying/Drying Time	At +20 °C and 65 % relative humidity recoatable after approx. 12 hours. Lower temperatures and higher humidity extend the drying time.
Note	The connection of embedded copper strips for earthing/grounding of the shielding and installation of professional safety switch must be effected by an electrically skilled person. Each surface has to be connected. Connection can be effected e.g. via the earthing/grounding conductor (earth wire) of a power socket. For this the copper strip has to be connected with the socket. Corresponding laying/dimensioning of electrical installation is a precondition. This has to be checked by an electrically skilled (qualified) person before work begins on a site.  <b>Seamless Shielding:</b> The ideal protection from electromagnetic radiation (EMR) is only achievable with a complete shielding of full surfaces within a room. Uncoatable parts, such as windows, floors and doors are weak spots and lead to a reduction of the complete shielding. These areas can also be improved in their shielding capabilities by using appropriate materials.  <b>Compatibility:</b> Do not mix ElectroShield with other products.

## Advice

German Certificates	The reducing effect on electromagnetic waves and low frequency electromagnetic fields has been measured and confirmed by Prof. Pauli (Abteilung Hochfrequenz-, Mikrowellen- u. Radartechnik / High frequency waves, hyperfrequency waves and radar technique department), Universität der Bundeswehr München / University of German Federal Armed Forces, Munich. German test certificate available on request.
Please Note (Status as at Date of Publication)	Keep out of reach from children. Ensure good ventilation during use and drying. Do not eat, drink or smoke while using the product. In case of contact with eyes or skin, immediately and thoroughly rinse with water. Do not allow product to enter drains, waterways or soil. Clean utensils immediately after use with soap and water. Do not breathe spray dust. Further information: See Material Safety Data Sheet (MSDS).  Contains: 1,2-benzisothiazol-3(2H)-one, 2-methyl-2H-isothiazol-3-one. May produce an allergic reaction. In Germany: Advice for allergy sufferers with isothiazolinone allergy: Hotline 0180/5308928 (0.14 €/minute from German landline, MTS max. 0.42 €/minute).
Disposal	Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Particular attention should be made to removing wastage from site in compliance with standard construction site procedures. In Germany: Only completely empty containers should be handed in for recycling. Dispose containers with residues of liquid product via waste collection point accepting old paints and enamels. Dispose dried/hardened product residues as construction site/demolition/municipal or domestic waste.
EU limit value for the VOC content	of this product (category A/a): max. 30 g/l (2010). This product contains < 1 g/l VOC.
Product Code Paints and Enamels	M-GP01 (Germany)
Substances of Content - Declaration	Acrylic resin dispersion (emulsion), pigments, carbon fibres, calcium carbonate, water, additives, preservatives (Methylisothiazolinone, Benzisothiazolinone).
Technical Assistance	As it is impossible to list herein the wide variety of substrates and their specific problems, please request our technical assistance in case of queries. We will describe appropriate working methods, if a substrate not specified above is to be coated.

Customer Service Centre

Tel.: (+49) 0 61 54 / 71 17 10  
Fax: (+49) 0 61 54 / 71 17 11  
e-mail: kundenservicecenter@caparol.de

International Distribution: Please see [www.caparol.com](http://www.caparol.com)

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All suggestions and application instructions herein are based on our latest technical experience. Due to the wide variety of individual project conditions, we cannot be held responsible for their content. These instructions do not release the purchaser/ applicator from his responsibility to determine the suitability of the product in consideration of the project characteristics. These instructions are to be considered void when a new edition is released. Our general conditions of sale and delivery in their latest edition apply. This document is a translation of our German Technical Information No.402 · ElectroShield · Issued: January 2014

DAW International Business: **DAW SE** · P.O.B. 1264 · D-64369 Ober-Ramstadt · Tel. +49 6154 71-1274 · Fax +49 6154 71-1264 · Internet [www.caparol.com](http://www.caparol.com)