

Shielding Paint CFA40 Application Guidelines

GIGAHERTZ[®]
SOLUTIONS

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Safety Notes

All paints have a high colouring property so please proceed with care. Wipe off paint splashes immediately using a damp cloth and avoid letting them dry out. Do not inhale spray mist! Please ensure adequate venting during the process of paint application and drying! Please avoid eating, drinking and smoking during application! Rinse thoroughly immediately upon eye or skin contact!

We will be glad to send you a Safety Data Sheet upon request. Please contact us under the details at the top right.

Substrate / Prime Coat

Excellent adhesion qualities on almost all surfaces, such as paint, drywall, plastering, concrete, styrofoam, wood, glass, many plastic materials, etc.

The surface must be dry, clean and free from separating substances.

Old coats of paint or wallpaper which could be etched by water, need to be removed.

It is essential to preprocess strongly absorbent substrates with a solvent-free prime coat. Otherwise, the bonding agent and water will be absorbed by the surface, thus impairing the physical characteristics of the shielding paint.

Simple test: Apply paint to a small testing surface and let dry. If the painted surface is shimmering silver, the substrate is too absorbent and needs a prime coat. If the painted surface looks deep black, the substrate is sufficiently prime coated.

Processing

Temperature:

The minimum process temperature for application and drying is 5° C / 41° F.

Preparation:

The conductive particles of the paint settle at the bottom of the container. Please shake well or stir for at least one minute immediately before processing, ideally using the paint stirrer AR40.

Never mix with water or any other coating material.

Procedure:

If need be, preprocess the underground with a solvent-free prime coat. Also if need be, level out mounting surface for the grounding plate.

Drill holes for the grounding plate.

If need be, apply grounding strap in one piece onto all surfaces to be painted (please see grounding instructions).

Apply shielding paint in one or two layers, depending on the desired shielding attenuation. Please make sure to apply two layers onto the surface allocated for the grounding plate.

For the application of the paint, we recommend the use of high quality paint rollers with a pile height of 10-13 mm. In order to obtain best shielding attenuation, it is essential to apply the paint evenly thick and over the full surface! Always apply an equal amount of paint onto the paint roller and then always paint equally large surfaces!

Rollers with a short pile height, as well as foam rollers or paint brushes are not really adequate, as the layer of paint applied with these is often too thin for a suitable shielding attenuation.

Airless spraying is not possible.

After allowing 24 hours for the shielding paint to dry, fix the grounding plate onto the wall (additional adhesion is essential in the exterior).

For further information please see „Final Coating“.

Consumption

The consumption depends on the nature and absorbency of the underground. Typical yield for interior use: 6.6 m²/l. Typical yield for exterior use: 5 m²/l.

Hint: From customer feedbacks we know that the shielding paint is often applied too thin. For a good levelling, our paint is of low viscosity which is why the customers tend to a thin coating. However, a yield exceeding 6.6 m²/l will lead to a decrease in the specified attenuation. Therefore, even if it seems a waste to you, please make sure to apply thick layers of paint in order to obtain the best attenuation.

Drying time

Allow 12-24 hours drying time prior to further processing.

Protect from rain for at least 12 h.

Fully cured after 7 days.

Grounding

Large surface shielding with shielding material is not considered electrical equipment, but „external conductive parts“ in accordance with IEC 826-03-03 or IEC 195-06-11, and therefore a new method of DIN VDE 0100-100:2009-06. Once the material is connected to the potential equalization, it automatically forms part of the electrical system, and the general technical rules and regulations must be observed.

According to the latest state of technology, it is important to distinguish between the protective equipotential bonding and the functional equipotential bonding.

The purpose of the protective equipotential bonding (green/yellow cable) is to avoid hazardous contact voltage by immediately triggering the circuit breaker. The purpose of the functional equipotential bonding (transparent cable) on large surface shielding is to minimise the emission of low frequency alternating electrical fields, i.e. to avoid leaking electrical fields.

Please find further information, grounding instructions as well as the necessary grounding components on our homepage.

Final Coating

To protect the viscoplastic, soft shielding paint surfaces from mechanical damages or humidity, we recommend to apply two layers of top coat.

Exterior: Please use high quality, well covering, highly water resistant plastic-bonded emulsion paint or silicon resin paint.

Interior: Please use high quality, well covering plastic-bonded emulsion paint or silicate emulsion paint.

Suitable ecological paints:

KEIM Silicate Paint (Biosil, Ecosil, Optil), VOLVOX Clay Paint, HAGA Chalk Paint.

Not suitable ecological paints:

Pure mineral coatings of clay, chalk or pure silicate paints, such as slaked lime paints (e.g. Kreidezeit), natural resin dispersions (e.g. Livos, Auro), casein glue paints, clay paints (e.g. Claytec) or pure silicate paints (e.g. Kreidezeit, Auro) often don't adhere sufficiently on the shielding paint.

We always recommend a small test coating.

Alternatively you may cover the shielding paint with tapestry, glass fabric, etc.

In-wall application:

Due to its high adhesive tensile strength, our shielding paint can (in accordance with ETAG 004 for EIFS-systems, with a minimum of 0.08 N/mm²) also be used for in-wall application under pure plastic bonded plaster. Never use mineral plaster, no adhesion!

Floor surface:

Loosely laid floor coverings (carpets, „click“ laminates, etc.) can be laid directly onto the shielding paint. Take care not to damage the soft surface of the shielding paint!

Bonded floor coverings of soft, flexible material (carpets, cork, laminate, etc.) can only be laid after applying a solvent-free prime coat onto the shielding paint.

We strongly advise not to use active floor coverings such as solid wood parquet (insufficient adhesive tensile strength of the shielding paint).

Further Information

Tool cleaning

Rinse with water and soap immediately after use.

Storage

Keep cool, frost-free and out of the reach of children. Opened containers need to be tightly closed and also kept in a cool place.

The paint has a storage life of minimum 12 months after shipment from Gigahertz Solutions.

Waste disposal

Containers must be fully emptied prior to recycling. Material residues must be left to dry and can then be disposed of with the household waste. Do not empty into drains, waters, or into the soil.

Labellings

Product code: M-DF01 (GISCODE)
Water hazard class: 1 (VwVwS)
Waste code no.: 08 01 12 (AVV)
Hazardous ingredients: –
ADR: –
UN-No.: –
Transport hazard classe: –
Environmental hazards: –

Ingredients

Pure acrylic emulsion, graphite, water, carbon black, additives, preserving agents.

Preserving agent: MIT (2-methyl-4-isothiazolinone-3-one) and BIT (1,2-benzisothiazolin-3-one).

VOC concentration:

0.2 g/l VOC. The EU limit value for cat. A/a is 30 g/l (valid as of 2010).

2015/05

Disclaimer

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