

1. GENERAL DESCRIPTION

Electrically conductive coating for plastic surfaces. Thermoplastic resin with electrical conductive copper pigments.

2. FEATURES

EMI 35 contains a special copper pigment, which builds an electrical conductive network within a thermoplastic resin. In this way it is easy to build up a conductive screen on plastic surfaces. This conductive screen prevents that electrical devices will emit electromagnetic noise or that the device is affected by electromagnetic noise from it's environment. A reduction of 60dB can be reached.

3. APPLICATIONS

EMI 35 is applied as a screen on plastic surfaces, to avoid electromagnetic noise. Typical applications are:

- Electronic prototypes or limited series.
- After service of office equipment, measuring instruments and maintenance equipment.

4. DIRECTIONS

Aerosol can

For relatively small applications very good results can be obtained at low cost using the aerosol can. Shake the can for 1 minute, until the agitator ball is free..

Bulk

For a bulk supply the product can be applied by spraying and also, to a limited extent, by the use of a brush.

Before being removed from the can, the content must be mixed thoroughly because over time the heavy metal pigment settles on the bottom. A paint shaker can be used for the mixing. When an electric (explosion protection) or pneumatic propeller mixer is used, speed and propeller size must be adjusted to clearly agitate the viscous liquid.

- **Brush application** is best carried out using a soft brush when **5 parts per volume EMI 35 are mixed with 2 parts per volume diluent for EMI 35**. Usually however, the obtained resistivity values is not as good as in case of spraying because the distribution of the pigment is not as uniform.
- **For the spraying**, nozzle apertures of 1 mm to 1.5 mm are used. An air pressure of 2 to 3 bar has been found satisfactory. When treating large hollow spaces, the spray pressure is to be reduced as far as possible to prevent blowback of the product. A spraying distance of 10 cm to 20 cm is favourable; the spray widths must have a 50% overlap. For smaller runs, spray guns can be used, but the bulk can needs to be shaken frequently. For serial production, spray systems with pressure tank and agitator are suitable.



EMI 35

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The most favourable dilution ratio is approx. 5 parts per volume EMI 35 to 4 parts per volume EMI 35 diluent. Routine monitoring of the viscosity can be performed with a Ford cup no.4. The above dilution ratio results in a run-out time of 16 s to 20 s. The dilution ratio and run-out time need, of course, to be optimised for the spray system in question.

The normal safety measures of the handling of flammable solvents must be taken. Other safety instructions are to be found in the safety datasheet.

Dried-on residues are readily cleaned from tools and equipment with ketones (e.g acetone, MEK or diluent for EMI 35). On metal tools, allow the coating to dry. It is then easily be removed by knocking or the use of a hard brush.

5. TYPICAL PRODUCT DATA (without propellant)

Coating as delivered:

Aerosol:

Flash point	: < 0 °C
Coverage for 50µ film thickness	: 0,32 m ² / 200 ml Spray

Bulk

Solid content	: 60 – 66%
Density	: 1,6 – 1,7 g/cm ³
Flash point	: 15 - 19 °C
Coverage for 50µ film thickness	: 7,7 m ² / l

Characteristics of the dry coating:

Color	: copper-brown
Drying time at 20°C	
Dry to touch	: 30 min
Complete drying	: 24 h
Temperature resistance	: - 40°C bis + 95°C
Surface resistivity at 25 µ coat weight	: < 0,5 Ohm / Square
Screening attenuation at 50µ coat weight	: 50 - 70 dB (ASTM ES 7-83)

6. PACKAGING

Aerosol : 12 x 200 ml

Bulk : 1 Liter

All statements in this publication are based on service experience and/or laboratory testing. Because of the wide variety of equipment and conditions and the unpredictable human factors involved, we recommend that our products be tested on-the-job prior to use. All information is given in good faith but without warranty neither expressed nor implied.

This Technical Data Sheet may already have been revised at this moment for reason such as legislation, availability of components and newly acquired experiences. The latest and only valid version of this Technical Data Sheet will be sent to you upon simple request or can be found on our website: www.crcind.com.

We recommend you to register on this website for this product so you will be able to receive any future updated version automatically.

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