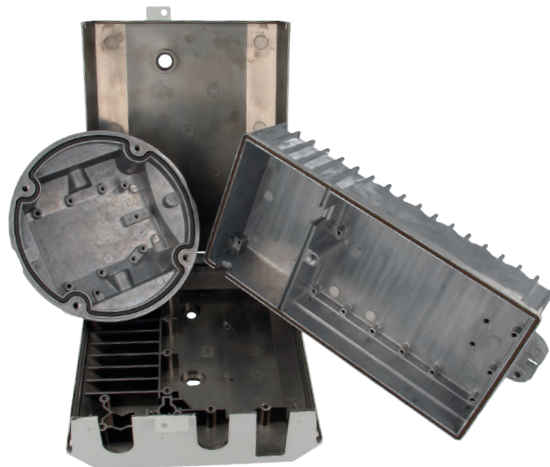


# CONDUCTIVE NICKEL COATING 3800

For EMI/RFI shielding of plastic housings and plastic components



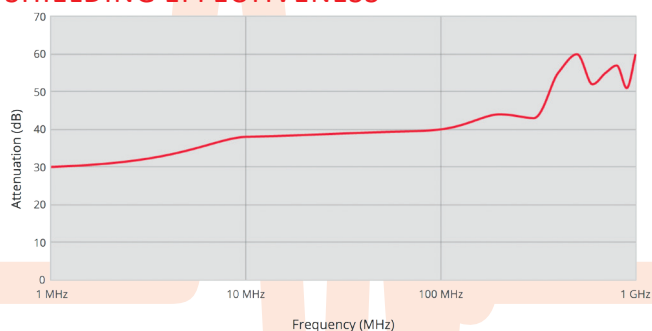
Applying electrically-conductive nickel coating 3800 series is a fast and easy method for EMI/RFI shielding/screening of plastic enclosures/housings. Your electrostatically sensitive applications can be shielded by using an electrically conductive paint containing nickel, copper or silver.

The paint comes in aerosols (Part number 3801) for easy use, but can also be supplied in tins of 5 liters, 7 kg (Part number 3805) and tins of 20 liters, 28 kg (Part number 3820) if you need larger quantities. Materials such as iron-chromium-aluminium and molybdenum disilicide are used for higher temperature applications.

Some oxide ceramics are used as conductors and semi-conductors for specialized applications. To fulfill the requirements concerning the limits of immunity and emission to interference, plastic housings and components need to be coated either fully or selectively with an electrically conductive coating. The nickel-conductive coating is contained in an air-drying acrylic resin.

It is recommended that an grounding connection is made to achieve maximum shielding performance. A suitable material for this is Part number 3201 Copper shielding tape which can simply be stuck onto the coated surface or over-sprayed with the electrically-conductive nickel coating. The coating, once it has been applied, has a mat gray textured finish.

## SHIELDING EFFECTIVENESS



■ 3800 Conductive nickel coating

Please note : These values are measured under laboratory conditions. Results may vary in other situations. Please read our Guarantee.

Revision date: 26-11-19

[www.hollandshielding.com](http://www.hollandshielding.com)

## BENEFITS

- Available in aerosol for prototype and small runs (Part number 3801)
- Low surface resistivity of 0.9Ω/sq yielding high attenuation
- Enables speed and easy coverage of complex shapes
- Delivery from stock
- Cost-effective solution
- Compatible with most plastics and metal substrates, the paint meets the requirements of BS IEC 61340-5-1:2001 (Basic specification: Protection of electronic devices from electrostatic phenomena) and suitable for use in Atex hazardous environments.

## PHYSICAL PROPERTIES

Color	Gray
Flash point (Abel closed cup- method IP 33/59)	25 °C
Recommended dry film thickness (ASTM D 4138-B2)	50 microns (2 thou)
Specific gravity	1.5 g/cc
Coverage per liter at 50 microns	7-10 square meters
Drying time: touch	15 minutes
Drying time: full	12 hours
Adhesion (BS 3900 E6)	Excellent
Pencil hardness (ASTM D3363-74)	H
Shelf life	12 months
Surface resistivity at 50 microns (2 thou) ASTM D257	0.5 Ohms/square or less
Viscosity when tinned 1:1 with *** tinnings	0.6p on a cone & plate, 27-32secs on a B4 flow cup
SE(dB)	50-55

## AVAILABILITY

- Part number 3801 : Aerosol 365 ml
- Part number 3805 : Tin 5 liters (7 kg)
- Part number 3820 : Tin 20 liters (28 kg)

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## SURFACE PREPARATION

All contaminants including mould release, grease and dirt must be removed. Mask areas that do not require spraying.

## MIXING

Shake vigorously for a minimum of 2 minutes to evenly distribute contents. Spray a small area to check compatibility with substrate.

Application: Operate in an upright position, spraying in light, even strokes from side to side to avoid flooding. Shake briefly at intervals during spraying. On completion, invert the aerosol and spray to clear valve and nozzle. It is advised to clear any excess material from the nozzle at frequent intervals to prevent blockage. If the nozzle blocks, use a pin to clear the opening, or remove the nozzle and flush with Toluene, Xylene or MEK. Replace the nozzle taking care to point the opening away from you. Optimum shielding performance is normally achieved at 3 coats. It is advised to coat several thinner coats than try to coat heavily in one pass.

## PRECAUTIONS

Pressurized container. Protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not spray on an open flame or any incandescent material. Keep away from sources of ignition- No smoking. Use under well ventilated conditions: Contains nickel / xylene mix / toluene. Harmful by inhalation. Do not breathe vapour. In case of insufficient ventilation- wear suitable respiratory equipment, which must be used in accordance with the manufacturer's instructions. For excessive vapour inhalation, remove to fresh air and summon medical attention.

Avoid contact with skin and eyes: In case of skin contact, wash with soap and water, dry and apply work cream. Eye Contact - flush with water for at least 15 minutes and seek medical attention. If accidentally swallowed, summon medical attention.