

42-204NP Conductive Nickel Coatings (Polyurethane)

Our 42-204NP (grey) coating contains a stabilised nickel loading in a three-component polyurethane system. This coating provides effective EMI/RFI shielding and is recommended for use above 10MHz. The nickel-based system is an effective substitute for silver when the highest conductivity properties are not required. The cost per sq metre per dry film thickness (DFT) for EMI/RFI shielding is much lower and this coating may also be used for electro-static discharge applications.

Characteristics: This formulation is highly conductive, absorbing and dissipating the electrical vector of EMI radiation. An important feature is the attenuation of the magnetic vector. This feature enables the coating to prevent radiation emission from an EMI source and is most effective when used as close as possible to such source.

Excellent oxidation resistance is ensured by special nickel treatment process. 42-204NP provides good chemical resistance and adhesion properties for the coating which, in turn, exhibits outstanding resistance to moisture, abrasion and weather.

Application-Mixing: The base component must be thoroughly shaken to disperse the nickel pigment. Combine the base and the hardener for the PU system. Add the respective thinner and stir well. Adjust the thinner to achieve the correct viscosity.

Usage: Excellent adhesion particularly for thermosets, such as polycarbonates, skinned urethane foams and GRP. For thermoplastics, coat a small test area to check for environmental stress cracking, which can be caused by the solvents present.

Equipment: Apply with a conventional spray gun at a pot pressure of 6-10 psi and 35-55 psi atomising pressure. A pressure pot equipped with air agitator should be used to prevent settling out.

Stock: This product is normally available ex stock in 5 litre kits.

Storage: Store between 5 and 35°C (41 and 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area.

Product Features	<ul style="list-style-type: none">Effective shielding
Markets	<ul style="list-style-type: none">Industrial

Typical properties

Product Property	Value	Test Method	Footnotes
Surface resistivity @ 0.025mm DFT	<1.5 ohms/square		
Shielding Capacity	40-60 dBs		(Attenuation)
Recommended Dry Film Thickness (DFT)	0.05mm		
Nickel (by weight in dry film)	77-82%		
Theoretical coverage @ 0.050mm	5 m ² /l		
Weight per litre	1.52 kg		
Drying Time @ 20°C	Touch and handle - 30-60mins, Recoat - 30-45mins, Maximum Conductivity - 72-120 hours		
Colour	Grey		
Mixing Ratio	6:1:1		
Impact resistance	Excellent		
Adhesion to metal, ceramics & plastics	Excellent - thermosets		
Chemical resistance	Excellent		
Weather resistance	Excellent		
Shelf life (unopened containers)	6 months		
Thinner/reducer	44-207NP		

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