Trimite J2904

Electromagnetic Shield Coating

Description

An electrically highly conductive coating for plastic substrates, designed to meet the strictest control of electrical interference.

Finish

Matt.

Features

- It is formulated using specially prepared metallic nickel to provide electromagnetic compatibility (EMC) on plastic housings for a wide range of electronic equipment.
- Provides an effective shielding against radiated electromagnetic interference (EMI) and protection against electrostatic discharge (ESD).
- Can be applied directly to most plastic substrates used in the manufacture of electronic housings.
- Formulated to minimise settlement in the can and spray equipment lines.
- A cost effective and efficient way of complying with the US Federal Communications Commission (F.C.C.) Docket 20780; the German Regulations V.D.E. 0871-0879 (the Association of German Electrotechnical Engineers); and has also been given approval by the US Underwriters Laboratory Inc.

Complies With

Please consult Trimite.

Product Code

J2904- .

Volume Solids

Please consult Trimite.

VOC's

Please consult Trimite.

Colour Range

Metallic Grey.

Film Thickness & Coverage

	Dry	Wet*	Approx. Coverage*
Typical:	50 µm	100 µm	2 - 3 m^2/per kg

* The above wet film thicknesses is approximate and is based on the typical degree of thinning recommended under 'Application Details'.

Actual coverage varies considerably with factors including surface porosity, roughness, application methods and conditions.

Drying & Overcoating Times
at Typical DFT

	10ºC	20ºC	30ºC
Surface Dry:	30 min	15 min	10 min
Hard Dry:	2 h	50 min	25 min
Overcoat Min:	not normally overcoated		

Note: properly painted parts should attain a conductivity of less than 1ohm square in one hour. Maximum conductivity is normally achieved in 12 hours.

Drying and overcoating times can be greatly affected by method and conditions of application such as thickness applied, temperature, ventilation etc. Data above are given as a guide.

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Surface Preparation	• **Plastics:** the substrate must be thoroughly clean and free from mould release agents and static charges. Owing to the sensitivity of many plastics to certain solvents, **Antistatic Cleaner J131** should be used. • **Priming:** J2904 is suitable for direct application to thermoplastics. For the thermoset range of plastics (i.e. Glass Reinforced Polyesters, Glass Reinforced Phenolics, SMC, DMC and Polyurethane Foam mouldings) **Trimite AP210** Two Pack Polyurethane Primer or **Trimite AP262** Two Pack Acrylic Primer should be used. Please consult Trimite for specific project advice.
Mixing	Thoroughly stir the coating before use. A power mixer is highly recommended. A wide-bladed stirrer is essential for adequate mixing if only hand stirring. Stir occasionally during use to maintain an homogenous mix.
Mix Ratio	Not applicable – single pack product.
Application Conditions	Throughout the application and the drying/curing time of coatings: (a) good ventilation is required; (b) do not apply when damp weather conditions are likely; (c) the substrate temperature should be at least 3ºC above the Dew Point; and (d) the RH (Relative Humidity) should be below 85%. It is advisable not to apply the product when the ambient temperature falls below 5ºC. The paint temperature at the time of application should ideally be 15º - 20ºC.
Application Details	• Designed for application by conventional spray. • Thinner PT1000 or PT1002 (depending on the type of plastic substrate) may be added up to 50% by volume, to obtain a viscosity of 45 – 50 seconds at application temperature using a BS B4 viscosity cup. • Film Thickness: To achieve the full shielding properties, J2904 should be applied in several passes to achieve a wet film thickness of 100 microns, which will result in a dry film thickness of approximately 50 microns.
Thinner/Cleaner	PT1000 or PT1002 Thinner / J103 Gun Cleaner.
SG	1.85 $\pm$ 0.15 kg/l.
Flash Point	21º – 32ºC.
Shelf Life	Min. 1 year from date of delivery when correctly stored in unopened containers.
Storage	The product should be stored in cool, dry, frost-free conditions, in sealed containers. Most paint materials will apply optimally when at 15º - 20ºC.
Health & Safety	Refer to the product's Safety Data Sheet and safety advice on the product label before use.
Date of Issue	May 2024.

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Attenuation Efficiency

Measured readings of a typical 52 micron application under actual test conditions at an independent laboratory.

Frequency	Attenuation		Frequency	Attenuation
MHz	dB		MHz	dB
0.1	125		100	87
0.2	127		150	90
0.4	122		200	100
0.6	123		250	82
1	120		300	71
2	118		400	70
4	100		600	67
6	90		700	68
15	90		800	56
40	87		900	58
60	82		1000	52