843WBU

Electromagnetic Shielding Paint

843WBU is a 1-part, water-based conductive paint, pigmented with highly conductive silver-coated copper flake. It is easy to use, with no let-down and no heat cure necessary. It adheres strongly to most injection-molded plastics, such as ABS, PBT and PVA. It also bonds well to metal and drywall and can be painted over with common architectural paints.

843WBU is designed to reduce EMI/RFI interferences in architectural and electronic applications.



Features & Benefits

Provides excellent EMI/RFI shielding over a broad range of frequencies

Non-flammable and no noxious odors

Ships as a non-DG by air

Low VOC content

Cure Instructions

Allow to cure at room temperature for 24 hours, or cure in an oven at one of these time/temperature options:

Temperature	65 °C	80 °C
Time	1 h	30 min

Storage and Handling

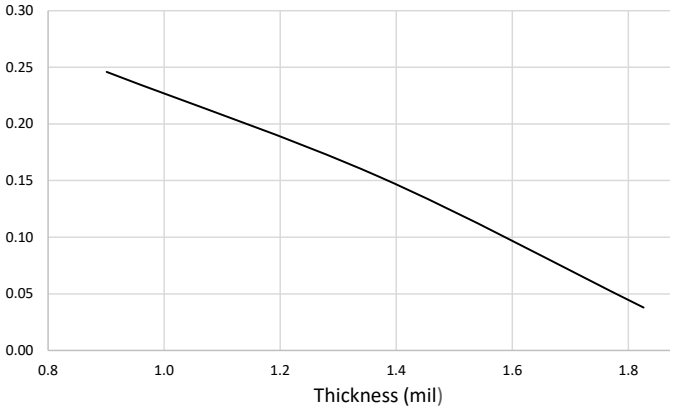
Store between 5 and 27 ˚C in a dry area, away from sunlight (see SDS).

If exposed to freezing temperatures during storage or transport, keep product at room temperature for at least two days and ensure it is fully homogeneous prior to use.

Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
843WBU-55ML	Bottle	55 mL	75.3 g
843WBU-850ML	Can	850 mL	1.16 kg
843WBU-3.78L	Can	3.6 L	4.93 kg

Surface Resistance by Paint Thickness



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Liquid Properties

Chemistry	Water-based polyurethane	—
Density	1.4 g/mL	ASTM D1475
Viscosity @ 25 ˚C	640 cP	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Recoat Time	10 min (ABS) 5 min (Drywall)	—
Film Thickness	35 µm (Recommended) 20 µm (Minumum)	—
Percent Solids	51 %	—
Calculated VOC	89 g/L	—
Theoretical Coverage @ Recommended Thickness [a]	87 990 cm^2/L	Calculated
Shelf Life	3 y	—

[a] Based on 100% transfer efficiency

Cured Properties

Color	Metallic light brown	—
Magentic Class	Diamagnetic (non-magnetic)	—
Resistivity	4.5 x 10^{-4} Ω·cm	MIL-STD-883J
Surface Resistance @ 50 µm	0.03 Ω/sq	Calculated
Adhesion	5B (ABS) 5B (Aluminum) 5B (Copper) 5B (Polycarbonate) 5B (Glass) 5B (PVC) 5B (FR4) 5B (Stainless Steel)	ASTM D3359
Pencil Hardness	H, hard	ISO 15184

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Application Instructions

Read the product SDS and Application Guide for more detailed instructions before using this product.

Recommended Preparation

Plastic—Clean the substrate with Isopropyl Alcohol, MG #824, so the surface is free of oils, dust, and other residues.

Drywall—For new drywall, apply directly on top of the drywall primer, after the primer has properly cured. When applying on top of existing paint, first wash the wall with a solution of T.S.P. diluted with water at a 1:10 ratio, to ensure good adhesion.

Paint Roller and Brush

Thinning is not required. Use a standard paint roller, foam brush or MG #855 horse hair brush.

Manual Spray Guns

Use a standard fluid nozzle gun to spray the paint. The settings listed below are recommendations; however, performance will vary with different brands:

	LVMP	HVLP
Nozzle tip diamter	1.8 mm	1.8 mm
Inlet pressure	5–15 psi	5–15 psi
Air flow	10–15 SCFM	8.3 SCFM
Air cap	5–10 psi	5–10 psi

When using a pressure pot and agitator, keep the agitator at low mixing speed with air pressure of 20–50 psi. Use the lowest pressure necessary to keep the particles suspended.

Selective Coating

For higher volume applications, paint can be applied via selective coating equipment. Use a system with constant fluid recirculation to keep the particles from settling in the lines. The fluid nozzle must be 1.8 mm in diameter and 5–10 psi fluid pressure is recommended.

Clean-up

Clean the spray system and equipment with tap water after use.

Disclaimer: This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.