

843AR Liquid



SUPER SHIELD™ Silver-coated Copper Conductive Paint

843AR is a conductive paint that consists of a 1-part, solvent-based acrylic lacquer, pigmented with a highly conductive silver-coated copper flake. It is smooth, hard, and abrasion resistant. It is a ready-to-spray system, with no let down necessary. It has a quick dry time, with no heat cure necessary. It adheres strongly to most injection-molded plastics, such as ABS, PBT, PVA and ABS/PC blend. It provides excellent shielding levels at high frequencies.

843AR is designed to provide a conductive coating for the interior of plastic electronic enclosures that suppresses EMI/RFI emissions. It excels when higher levels of shielding are required.

Features & Benefits

UL Recognized (File # E202609)

Provides effective EMI/RFI shielding over a broad frequency range

Mild solvent system, safe on polystyrenes

Does not contain toluene, xylene, or MEK

Also available in aerosol (843AR-340G) format, see separate TDSs

Cure Instructions

Allow to dry at room temperature for 24 hours, or after letting sit for 3 minutes, cure the paint in an oven for 30 minutes @ 65 °C.



Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
843AR-55ML	Bottle	55 mL	60 g
843AR-900ML	Can	850 mL	927 g
843AR-3.78L	Can	3.60 L	3.93 kg
843AR-18.9L	Pail	18.9 L	20.6 kg

Storage and Handling

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

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Liquid Properties

Chemistry	Acrylic	—
Density	1.1 g/mL	ASTM D1475
Viscosity @ 25 °C	<30 cP	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Recoat Time	3 min	—
Film Thickness	50-65 µm (Recommended) 30 µm (Minumum)	—
Percent Solids	31 %	—
Calculated VOC	187 g/L	—
Theoretical Coverage @ Recommended Thickness ^a	23 290 cm ² /L	Calculated
Shelf Life	4 y	—

^aBased on 99% transfer efficiency

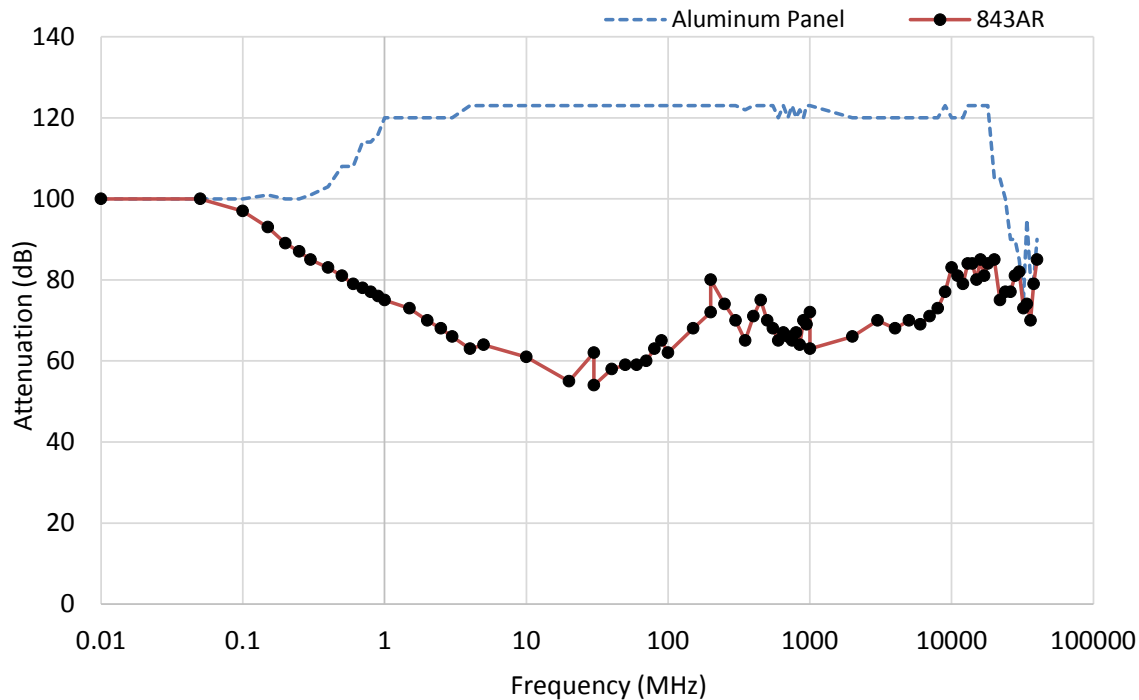
Cured Properties

Color	Metallic brown	—
Magentic Class	Diamagnetic (non-magnetic)	—
Service Temperature Range	-40–120 °C	—
Resistivity	3.0 x 10 ⁻⁴ Ω·cm	MIL-STD-883J
Surface Resistance @ 50 µm	0.080 Ω/sq	Calculated
Adhesion	5B (Aluminum) 5B (Copper) 5B (Polycarbonate) 5B (Polyamide) 5B (Glass) 5B (PVC) 5B (FR4) 5B (Stainless steel)	ASTM D3359
Pencil Hardness	F, medium	ISO 15184

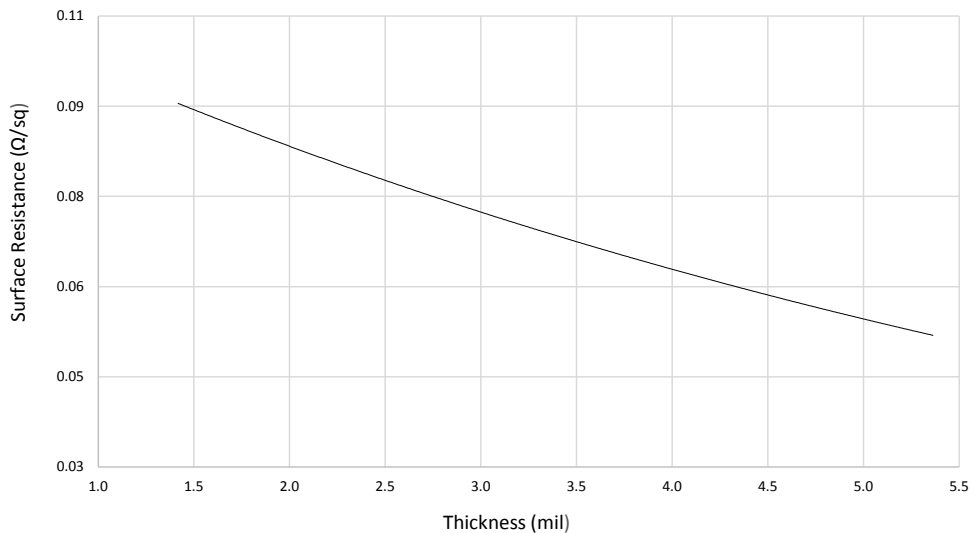
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Shielding Attenuation



Surface Resistance by Paint Thickness



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Application Instructions

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

Recommended Preparation

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

Recommended Thinner

843AR is ready to spray. Thinning is not required.

Brush

Brush application is not recommended for this product. Use a 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 diameter	1.2–1.8 mm	1.4–1.8 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. A fluid nozzle ranging from 1.2 mm–1.8 mm diameter and 5–10 psi fluid pressure is recommended depending on nozzle size.

Clean-up

Clean spray system and equipment with MEK or acetone, MG #434.

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.

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