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

Available Packaging

Cat. No.	Packaging	Net Vol.	Net Wt.
843AR-900ML	Can	850 mL	927 g
843AR-3.78L	Can	3.60 L	3.93 kg

Contact Information

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Cured Properties

Resistivity	3.0×10^{-4}	Ω·cm
Surface Resistance @ 50 µm	0.080	Ω/sq
Service Temperature Range	-40–120	˚C

Usage Parameters

Recoat Time	3	min
Cure Times	24 h @ 22	˚C
	30 min @ 65	˚C
Recommended Film Thickness	50–65	µm
Minimum Film Thickness	30	µm
Theoretical Coverage @ 2 mil (based on 100% transfer efficiency)	23 290	cm^2/L

Uncured Properties

Viscosity @ 25 ˚C	<30	cP
Density	1.10	g/mL
Percent Solids	31	%
Shelf Life	3	y
Calculated VOC	187	g/L

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Application Instructions

Read the product SDS and Application Guide for more detailed instructions before using this product (downloadable at www.mgchemicals.com).

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 recommend for this product. Use a foam brush or MG #855 horse hair brush.

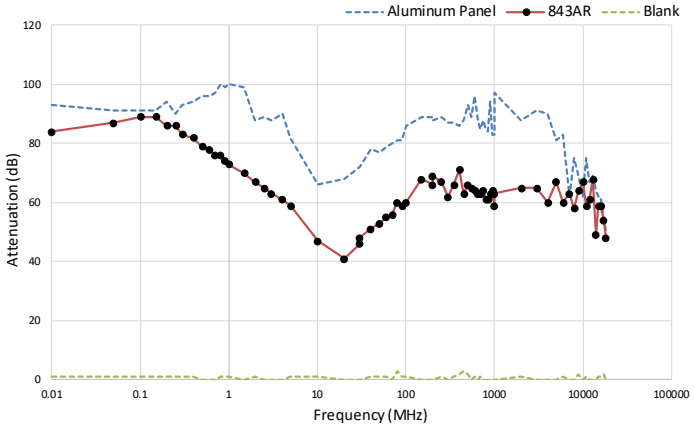
Manual Spray Guns

Use a standard fluid nozzle gun to spray the diluted 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

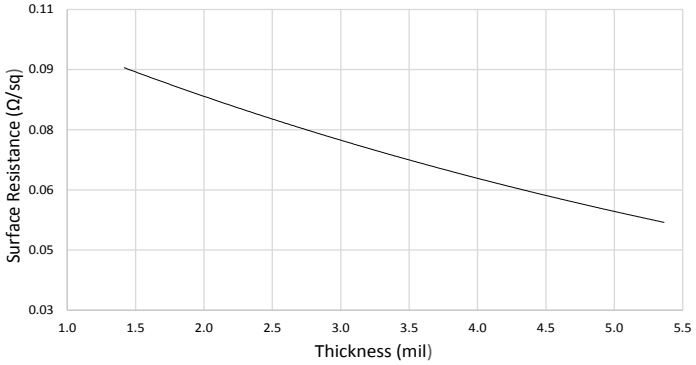
When using a pressure pot and agitator, keep the agitator at low mixing speed with air pressure of 20–50 psi. Use the lowest pressure necessary to keep the particles suspended.

Shielding Attenuation



Test performed with a two-coat thickness.

Surface Resistance by Paint Thickness



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.

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.

Clean-up

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

Storage and Handling

Store between -5 and 40 ˚C in a dry area, away from sunlight (see SDS).

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.