842ARL Liquid

Silver Conductive Paint

842ARL is a 1-part silver acrylic paint that cures at room temperature and provides exceptional shielding from electromagnetic interference across a wide spectral range. This coating uses a highly engineered silver flake that enables exceptional shielding even at low film thicknesses, helping to extend coverage and lower costs. The cured film is highly flexible and has a pleasing, lustrous esthetic. It can be applied by either spray or brush.

The broadband protection afforded by silver acrylic paint make it attractive for use in industries such as automotive, aerospace, communications, and military. Its low film build also makes it a suitable option for package level shielding, replacing expensive methods like canning or stamping.



Features & Benefits

- Superior conductivity
- Adheres strongly to plastics, metals and glass
- Conductive at low film thickness
- Strong corrosion resistance
- Withstands wave soldering
- HAPs-free formula

Available Packaging

Cat. No.	Packaging	Net Vol.	Net Wt.
842ARL-55ML	Bottle	55 mL	72.1 g
842ARL-900ML	Can	850 mL	1.11 kg
842ARL-3.78L	Can	3.6 L	4.7 kg

Cured Properties

Resistivity	7.5×10^{-5}	Ω·cm
Service Temperature Range	-40–120	˚C

Usage Parameters

Recoat Time	3	min
Cure Times	24 h @ 22 30 min @ 65	˚C ˚C
Recommended Film Thickness	25	µm
Minimum Film Thickness	8	µm
Theoretical Coverage @ 1 mil (based on 99% transfer efficiency)	42 000	cm^2/L

Contact Information

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Uncured Properties

Viscosity @ 25 ˚C	16	cP
Density	1.3	g/mL
Percent Solids	39	%
Shelf Life	3	y
Calculated VOC	268	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

842ARL is ready to spray. Thinning is not required.

Brush

Thinning is not required for most brush applications. 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	1.2–1.4 mm	1.2–1.4 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.

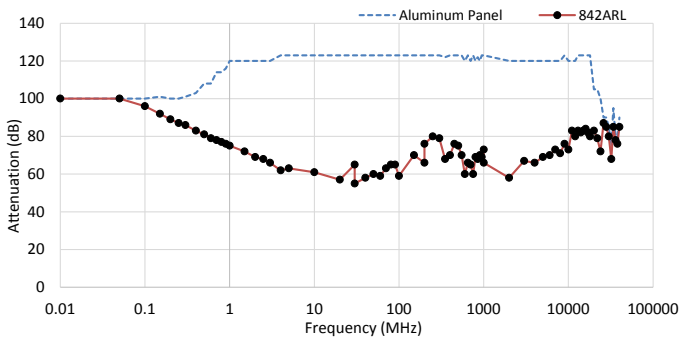
Selective Coating

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–1.4 mm diameter and 5–10 psi fluid pressure is recommended depending on nozzle size. Thin the paint to adjust the viscosity to the level appropriate for the valve being used.

Cure Instructions

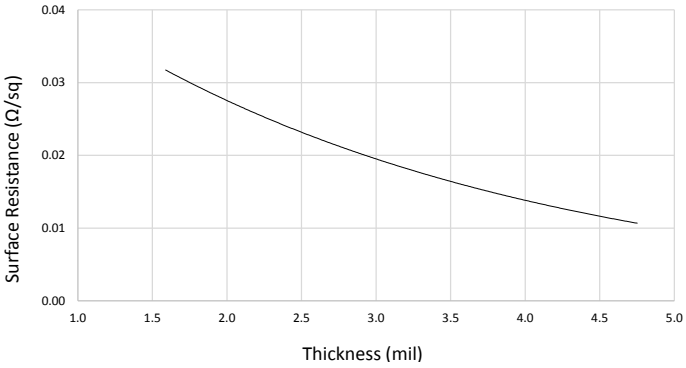
Allow to dry at room temperature for 24 hours, or after letting sit for 3 minutes, cure the paint in an oven for 30 minutes @ 65 ˚C.

Shielding Attenuation



Test performed with a two-coat thickness.

Surface Resistance by Paint Thickness



Clean-up

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

Storage and Handling

Store between -5 and 27 ˚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.