# 842AR Liquid

## Super Shield™
## Silver Conductive Paint

842AR is a conductive paint that consists of a 1-part, solvent-based acrylic lacquer, pigmented with an extremely conductive silver flake. It is smooth, hard, and abrasion resistant. It can be easily applied by brush or spray. It has a quick dry time, with no heat cure necessary. It adheres strongly to most injection-molded plastics, such as ABS, PBT and PVA. It provides superior high frequency shielding. It also provides strong corrosion resistance, and is suitable for use in marine environments.

842AR is designed to provide a conductive coating for the interior of plastic electronic enclosures that suppresses EMI/RFI emissions. It excels when the highest level of shielding is required. Also, its thin minimum layer height makes it suitable for board level applications.


## Features and Benefits

- Provides superior EMI/RFI shielding over a broad frequency range
- Can be applied very thin, 0.2 mil minimum
- Strong corrosion resistance
- Mild solvent system, safe on polystyrenes
- HAP free—does not contain toluene, xylene or MEK
- Available in aerosol format (see separate TDS)

## Available Packaging

| Cat. No. | Packaging | Net Vol. | Net Wt. |
|---|---|---|---|
| 842AR-15ML | Jar | 12 mL | 20.8 g |
| 842AR-150ML | Can | 150 mL | 260 g |
| 842AR-900ML | Can | 850 mL | 1.47 kg |
| 842AR-3.78L | Can | 3.60 L | 6.25 kg |

## Contact Information

MG Chemicals, 1210 Corporate Drive
Burlington, Ontario, Canada L7L 5R6

Email: support@mgchemicals.com

Phone: North America: +(1)800-340-0772
International: +(1) 905-331-1396
Europe: +(44)1663 362888

## Cured Properties

| | | |
|---|---|---|
| Resistivity | $1.0 \times 10^{-4}$ | Ω·cm |
| Surface Resistance @ 50 µm | 0.015 | Ω/sq |
| Service Temperature Range | -40–120 | ˚C |

## Usage Parameters

| | | |
|---|---|---|
| Dry To Touch | 3 | min |
| Cure Times | 24 h @ 22 | ˚C |
| | 30 min @ 65 | ˚C |
| Recommended Film Thickness | 50 | µm |
| Theoretical Coverage @ 50 µm | ≤29 900 | $cm^2/L$ |

## Uncured Properties

| | | |
|---|---|---|
| Viscosity @ 25 ˚C | 873 | cP |
| Density | 1.70 | g/mL |
| Percent Solids | 61 | % |
| Shelf Life | 5 | y |
| Calculated VOC | 206 | g/L |

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## Application Instructions
Read the product SDS 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
When applying to polycarbonate or ABS, thin with MG #4351 Thinner 1. For other substrates, use MG #435 Thinner.

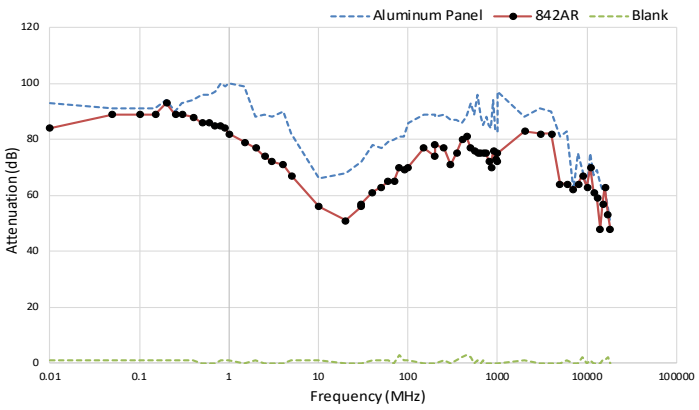
## Brush
Thinning is not required for most brush applications.

## HLVP Spray
Dilute 2-parts paint to 1-part thinner. Use a standard HVLP (High Volume Low Pressure) fluid nozzle gun with a minimum tip diameter of 0.8–1.0 mm. The settings listed below are recommendations; however, performance will vary with different brands:

- Inlet: 20–40 psi
- Air flow: 10–15 SCFM
- Air cap: 8–10 psi

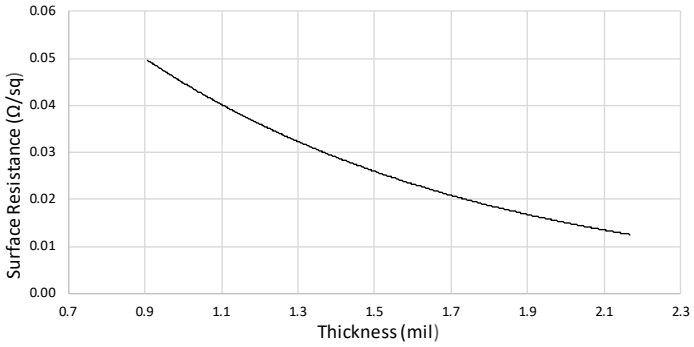
When using a pressure pot and agitator, keep the agitator at low mixing speed with air pressure of 20–50 psi. Use the lowest pressure necessary to keep the particles suspended.

## Shielding Attenuation




Test performed with a two-coat thickness.

## Surface Resistance by Paint Thickness




## Robotic Spray
For higher volume applications, paint can be applied via robotic spray equipment. Use a system with constant fluid recirculation to keep the particles from settling in the lines. A fluid nozzle ranging from 0.5 mm to 1.0 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.

## 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.