# 838AR Aerosol

# Total Ground™ Carbon Conductive Spray Paint

838AR is an economical conductive paint that consists of a 1-part, solvent-based acrylic lacquer, pigmented with highly conductive carbon powder. It is smooth, durable, and abrasion resistant. 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 strong corrosion resistance and is suitable for use in marine environments.

838AR is excellent for creating grounded surfaces and in low frequency RFI shielding applications, such as pickup cavities on electric guitars. It is also perfect for shielding metal detectors and other devices where a metalfilled conductive paint would cause malfunction.

## **Features & Benefits**

- Provides >50 dB of RFI shielding at frequencies <1 MHz</li>
- Quick dry time, no heat cure required, and easy to apply
- Strong corrosion resistance
- Mild solvent system, safe on polystyrenes
- Does not contain toluene, xylene, or MEK
- Available in liquid format (see separate TDS)

## **Available Packaging**

| Cat. No.   | Packaging | Net Vol. | Net Wt. |
|------------|-----------|----------|---------|
| 838AR-340G | Aerosol   | 442 mL   | 340 g   |

## **Contact Information**

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# **Cured Properties**

| Resistivity                       | 6.9 x 10⁻¹ Ω·cm |
|-----------------------------------|-----------------|
| Surface Resistance @ 50 µm        | 110 Ω/sq        |
| Salt Fog Resistance @ 35 °C, 96 h | Excellent       |
| 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 µm                  |
| Minimum Film Thickness             | 25 µm                  |
| Theoretical Coverage @ 2 mil       | 20 016 cm <sup>2</sup> |
| (based on 100% transfer efficience | cy)                    |

#### **Uncured Properties**

| Viscosity @ 25 °C | 46 cP     |
|-------------------|-----------|
| Density           | 0.84 g/mL |
| Percent Solids    | 7.6 %     |
| Shelf Life        | 3 у       |
| Calculated VOC    | 587 g/L   |

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#### **Safety Data Sheet**

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

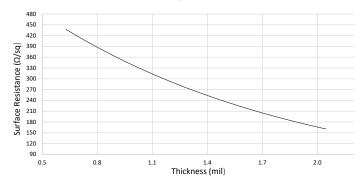
#### **Recommended Preparation**

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

## **Application Instructions**

- 1. Shake the can vigorously.
- 2. Spray a test pattern to ensure good flow quality.
- **3.** Tilt the board at 45° and spray a thin, even coat from a distance of 20–25 cm (8–10 in). Use spray-and-release strokes with an even motion to avoid paint buildup in one spot. Start and end each stroke off the surface.
- **4.** Wait 3 min before applying another coat, to avoid trapping solvent.
- **5.** Rotate the board 90° and spray again to ensure good coverage.
- **6.** Apply additional coats until desired thickness is achieved (go to step 3).
- **7.** Let dry 3 min at room temperature before applying heat cure.
- **8.** After use, clear the nozzle by inverting the can and briefly spraying until clear propellant comes out.

## **Surface Resistance by Paint Thickness**

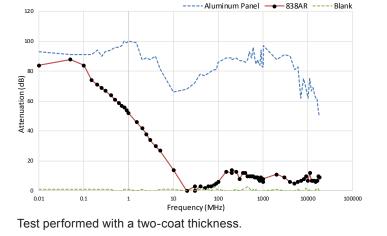


#### **Cure Instructions**

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.

#### **Storage and Handling**

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



## **Shielding Attenuation**

#### 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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