

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 metal-filled conductive paint would cause malfunction

Features & Benefits

Provides >52 dB of RFI shielding at frequencies <1 MHz

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

Also available in liquid and pen formats, 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.
838AR-340G	Aerosol	442 mL	340 g

Storage and Handling

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

838AR Aerosol



Uncured Properties

Chemistry	Acrylic	—
Density	0.8 g/mL	ASTM D1475
Viscosity @ 25 °C	46 cP	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Recoat Time	3 min	—
Film Thickness	50 µm (Recommended) 25 µm (Minumum)	—
Percent Solids	7.6 %	—
Calculated VOC	587 g/L	—
Theoretical Coverage @ Recommended Thickness ^a	1 500 cm ² per can	Calculated
Shelf Life	4 y	—

^aBased on 50% transfer efficiency

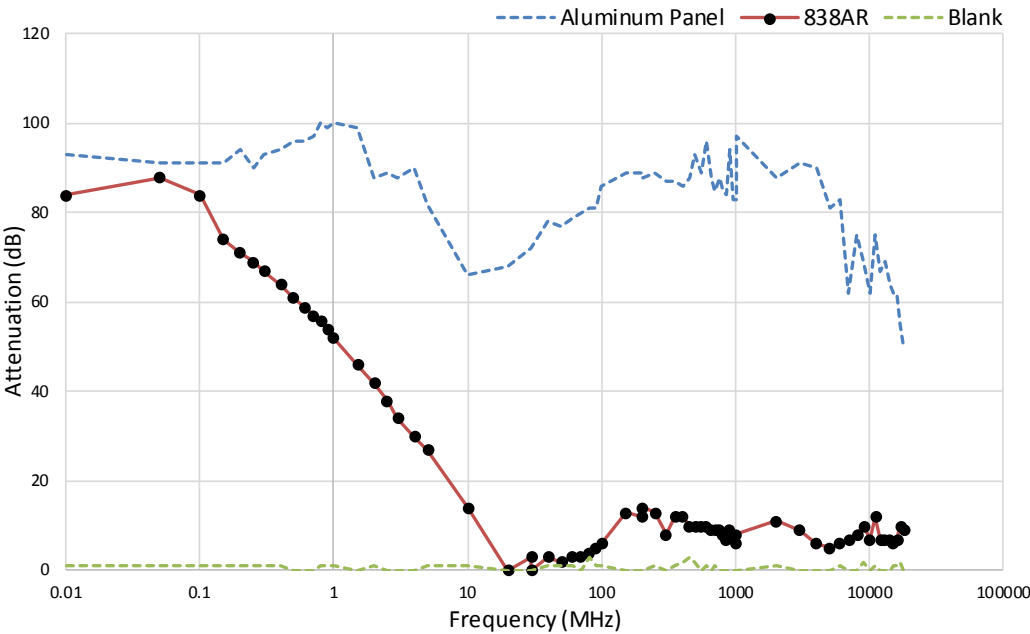
Cured Properties

Color	Black	—
Magentic Class	Diamagnetic (non-magnetic)	—
Service Temperature Range	-40–120 °C	—
Resistivity	6.9 x 10 ⁻¹ Ω·cm	MIL-STD-883J
Surface Resistance @ 50 µm	110 Ω/sq	Calculated
Salt Fog @ 35 °C, 96 h	Excellent	ASTM B117
Adhesion	5B (ABS) 0B (Aluminum) 3B (Copper) 5B (Polycarbonate) 5B (Polyamide) 5B (Glass) 5B (PVC) 3B (FR4) 1B (Stainless steel)	ASTM D3359
Pencil Hardness	H, hard	ISO 15184

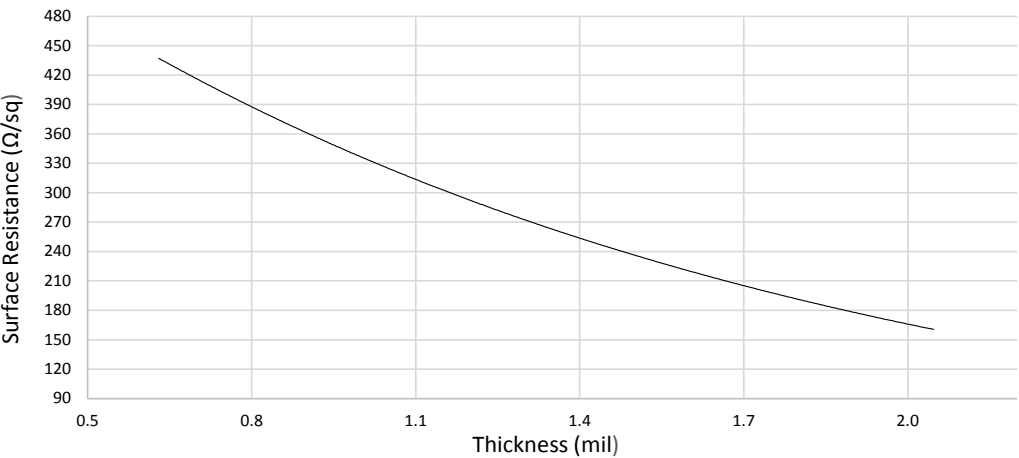
838AR Aerosol



Shielding Attenuation



Surface Resistance by Paint Thickness



838AR Aerosol



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

Aerosol

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.

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.

MG Chemicals 1210 Corporate Drive Burlington, Ontario, Canada L7L 5R6 ISO 9001:2015 Quality Management System SAI Global File: 004008
support@mgchemicals.com **North America** +(1) 800-340-0772 **International** +(1) 905-331-1396 **Europe** +44 1663 362888 **4 December 2025 / Ver. 5.1**