

839 Liquid



SUPER SHIELD™ Graphite Conductive Paint

839 is an economical acrylic paint that uses a graphite filler to create conductive, static free surfaces. This anti-static material reduces EMI/RFI. It is smooth, durable, and abrasion resistant. The cured coat withstands large temperature changes and marine environmental conditions without cracking, making it suitable for a wide range of applications.

It is a general use conductor to provide low cost EMI/RFI shielding. It can be used anywhere in a manufacturing process where it is necessary to impart conductivity to a surface.

Features & Benefits

High conductivity—low surface resistivity

Tough and durable coating, salt spray tested with excellent weatherability

Repairable and removable

Stronger adhesion than water based coatings

Corrosion-proof—slows or prevents substrate oxidation

Rub off resistant

Cure Instructions

Allow to dry at room temperature for 24 hours, or after letting sit for 5 minutes, cure the paint in an oven for 30 minutes @ 65 °C.



Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
839-1G	Can	3.60 L	3.58 kg
839-5G	Pail	18.9 L	18.8 kg

Storage and Handling

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

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Liquid Properties

Chemistry	Acrylic	—
Density	1.0 g/mL	ASTM D1475
Viscosity @ 25 °C	9 500 cP	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Recoat Time	5 min	—
Film Thickness	50 µm (Recommended) 25 µm (Minumum)	—
Percent Solids	39 %	—
Calculated VOC	516 g/L	—
Theoretical Coverage @ Recommended Thickness ^a	76 300 cm ² /L	Calculated
Shelf Life	3 y	—

^aBased on 99% transfer efficiency

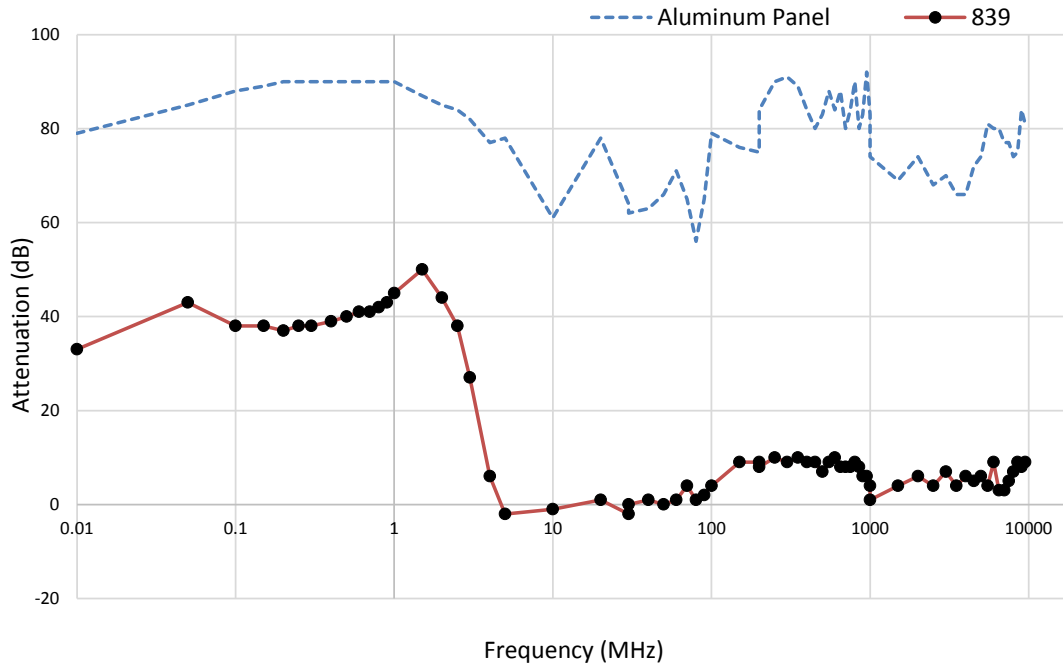
Cured Properties

Color	Dark grey	—
Magentic Class	Diamagnetic (non-magnetic)	—
Service Temperature Range	-40–120 °C	—
Resistivity	2.8 x 10 ⁻¹ Ω·cm	MIL-STD-883J
Surface Resistance @ 50 µm	28 Ω/sq	Calculated
Salt Fog @ 35 °C, 96 h	Excellent	ASTM B117

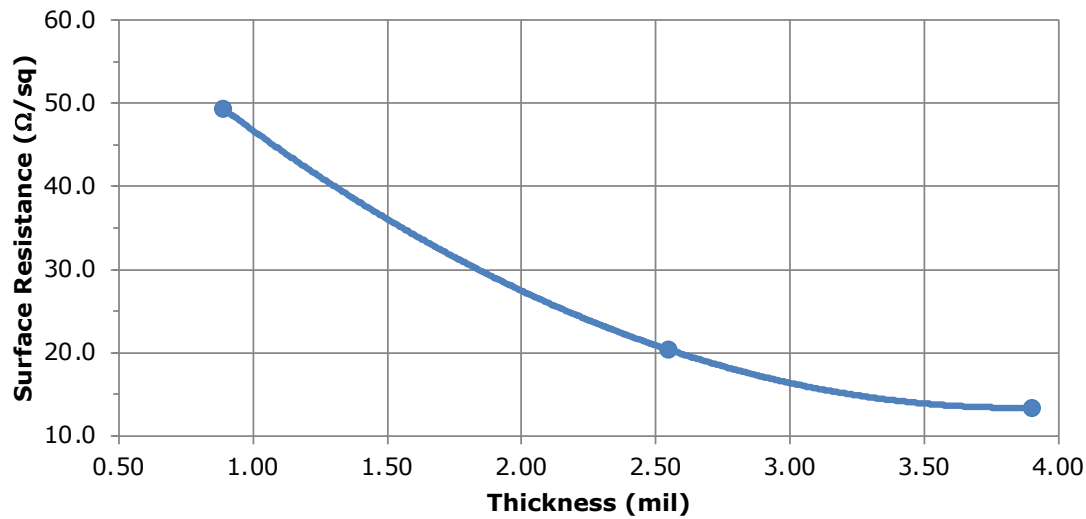
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Shielding Attenuation



Surface Resistance by Paint Thickness



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Application Instructions

Read the product SDS and Application Guide for more detailed instructions before using this product.

Recommended Preparation

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

Recommended Preparation

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. Use a foam brush or MG #855 horse hair brush.

Manual Spray Guns

Dilute 1-part paint with 1-part thinner. 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.

Clean-up

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

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.