Acrylic Conductive Paint Comparison Chart

	838AR	841AR	843AR	842AR
UNCURED PROPERTIES				
Conductive filler	C (carbon)	Ni (nickel)	Ag/Cu (silver coated copper)	Ag (silver)
Format	Liquid	Liquid	Liquid	Liquid
Color	Black	Dark grey	Light metallic brown	Light grey
Percent solids	15%	57%	31%	61%
Density @25 °C [77 °F]	0.89 g/mL	1.70 g/mL	1.10 g/mL	1.70 g/mL
Viscosity @25 °C [77 °F]	114 cP	1 460 cP	<30 cP	873 cP
Calculated VOC	519 g/L	236 g/L	187 g/L	206 g/L
Coverage & Application Properties				
Ready to spray	No	No	Yes	No
Theoretical HVLP spray coverage	≤13 000 cm^2/L	≤29 600 cm^2/L	≤15 000 cm^2/L	≤59 600 cm^2/L
Dry to touch	3 min	3 min	3 min	3 min
Cure time @25 °C [77 °F]	24 h	24 h	24 h	24 h
Cure time @65 °C [149 °F]	30 min	30 min	30 min	30 min
CURED PROPERTIES				
Electrical Properties				
Resistivity	0.63 Ω·cm	0.0040 Ω·cm	0.00030 Ω·cm	0.00010 Ω·cm
Surface resistance @50 µm	100 Ω/sq	0.49 Ω/sq	0.080 Ω/sq	0.015 Ω/sq
Attenuation from 0.01 to 18 000 MHz	23 dB ± 25 dB	59 dB ± 12 dB	65 dB ± 11 dB	73 dB ± 11 dB
Salt fog test @35 °C [95 °F], 96 h	Before: 70 Ω/sq After: 70 Ω/sq	Before: 0.38 Ω/sq After: 0.51 Ω/sq	Before: 0.08 Ω/sq After: 3.3 Ω/sq	Before: <0.01 Ω/sq After: 0.05 Ω/sq
Thermal Properties				
Constant service temperature	-40–120 °C [-40–248 °F]	-40–120 °C [-40–248 °F]	-40–120 °C [-40–248 °F]	-40–120 °C [-40–248 °F]
Mechanical Properties				
Adhesion	5B	5B	5B	5B
Pencil hardness	H, hard	3H, hard	F, medium	3H, hard
Magnetic Properties				
Magnetic class	Diamagnetic (non-magnetic)	Ferromagnetic (magnetic)	Diamagnetic (non-magnetic)	Diamagnetic (non-magnetic)
Relative permeability	<1.0	≥100	<1.0	<1.0

Values for conductive paints in aerosol format will vary slightly.

20 January 2020