







## **ELECTRONIC MATERIALS**



# Conductive Paints

#### State-of-the art coatings that enhance technical performance and appearance

The PPG SPRAYLAT® brand of conductive coatings is recognized as a global technology leader for spray-applied electromagnetic interference (EMI) and radio-frequency (RFI) protection, as well as high-performance electrostatic discharge (ESD) and lightning guard protection.

For more than 30 years, innovative chemistries developed by *Spraylat* engineers have been trusted by OEMs and converters to provide excellent conductivity and S.O.S. (Safe-On-Substrate) performance for diverse applications beyond consumer electronics, including advanced aerospace and automotive applications, military vehicles and equipment, and architectural coatings and paint. They also are well-suited to meet newly emerging demands for this type of technology.

PPG conductive coatings have a proven history of value, durability and ease of application in addition to their ability to enhance the technical performance and appears of conventional and highly-sensitive substrates. Please contact your PPG representative for more information on our conductive paints, including adhesion and attenuation specifications.

#### **Product Technology Codes**

A, SCY or Y B

SCZ or Z

Strong solvent Mild solvent Water-based

#### Silver & Hybrid Coatings

Product	Conductivity	Attenuation	Features	Benefits	Common Uses
B3730	$<$ 0.015 $\Omega/\text{sq.}$ @ 0.5 mils dry film thickness	> 85 dB from 1 MHz to 1 GHz	Excellent adhesion to most plastics with high durability Compatible with solvent-sensitive materials Offers a "zero tolerance" for loose particles	Provides cost saving due to excellent conductivity performance at a thin film thickness	Consumer electronics, medical, telecommunications
B3740	$<$ 0.015 $\Omega/\text{sq.}$ @ 0.5 mils dry film thickness	> 85 dB from 1 MHz to 1 GHz	Excellent adhesion to most plastics with high durability  Compatible with solvent-sensitive materials  Offers a "zero tolerance" for loose particles	Supplied as a concentrate in mild solvents that can achieve effective shielding at 0.5 mil in high-volume production environments	Consumer electronics, medical, telecommunications
SCY78265	$< 0.02 \Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Offers excellent adhesion to PU flexible foam and other substrates where flexibility is needed	Exceptional conductivity for applications that require flexibility	Aerospace, automotive



### **Ag-Coated Cu Coatings**

Product	Conductivity	Attenuation	Features	Benefits	Common Uses
A8219-1PC	$< 0.030~\Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion to acrylic, ABS, PS, VALOX™ resins and most plastic substrates	Ready to spray Can be air dried	Consumer electronics, telecommunications, medical
Y2000	$<$ 0.025 $\Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion to acrylic, ABS, polycarbonate, polystyrene and structural foams (e.g., <i>Valox</i> resins)	Ready to spray Low solids, high conductivity that can be used in a wide range of EMI/ RFI applications involving plastic substrates	Consumer electronics, telecommunications, medical
Y1399	$< 0.100 \ \Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion to acrylic, ABS, PS, Valox resins and structural foams	Ideal for RFI and EMI shielding applications in plastic electronic equipment housings	Consumer electronics, telecommunications, medical
Y1371	$<$ 0.050 $\Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion to acrylic, ABS, polystyrene, structural foams (e.g., NORYL® resins, <i>Valox</i> resins)	Ready to spray Low solids, high conductivity that can be used in a wide range of EMI/RFI applications involving plastic substrates	Consumer electronics, telecommunications, medical
Y1604	$<$ 0.300 $\Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion acrylic, ABS, polycarbonate, polystyrene and structural foams (e.g., <i>Valox</i> resins)	Ready to spray  Low solids, high conductivity that can be used in a wide range of EMI/RFI applications involving plastic substrates	Consumer electronics, telecommunications, medical
Y1606	$<$ 0.400 $\Omega/sq.$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion to acrylic, ABS, PS, <i>Valox</i> resins and most plastic substrates	Ready to spray Can be air dried A8219-1PC exempt	Consumer electronics, telecommunications, medical
B4022	< 0.040 $\Omega$ /sq. @ 1 mil dry film thickness	> 75 dB from 1 MHz to 1 GHz	Excellent adhesion to most plastics with high durability	Compatible with solvent-sensitive materials Offers a "zero tolerance" for loose particles	Automotive, consumer electronics, telecommunications, medical
B3755	< 0.015 $\Omega$ /sq. @ 1.0 mil dry film thickness	> 75 dB from 1 MHz to 1 GHz	Excellent adhesion to most plastics with high durability	Compatible with solvent-sensitive materials Offers a "zero tolerance" for loose particles	Consumer electronics, telecommunications, medical
B3892	< 0.015 $\Omega$ /sq. @ 1.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz	Contains mild solvents for use on solvent-sensitive substrates such as polycarbonate with excellent abrasion resistance	Ready to spray	Consumer electronics, telecommunications, medical
A85741	$<0.800~\Omega$ point to point @ 11.5" distance at 6.0 +/- 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz	Excellent adhesion to aircraft substrates like KEVLAR® fiber, epoxy and fiberglass Able to withstand lightning strikes and passes military specifications MIL-B-5087 and MIL-STD-1757	Passes military specification MIL-B-5087 and MIL-STD-1757 Can be specified for a range of military applications	Aerospace, military
Y1306	$<0.100~\Omega$ point to point @ 11.5" distance at 6.0 +/-2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz	Excellent adhesion to aircraft substrates like <i>Kevlar</i> fiber, epoxy and fiberglass Able to withstand lightning strikes and passes military specifications MIL-B-5087 and MIL-STD-1757	Ideal for lightning strike applications Can be used in military aviation applications	Aerospace, military
Z3100	$< 0.025~\Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Water based one component system with excellent adhesion to most plastic substrates	Alkaline removable coating, ready to spray	Automotive, consumer electronics, medical, telecommunications
Z1240	$< 0.021 \Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion to PC, ABS, structural foams (e.g., <i>Valox</i> resins, <i>Noryl</i> resins)	Ready to spray with fast flash off	Consumer electronics, telecommunications, medical
Y1325	$<$ 0.100 $\Omega/\text{sq.}$ @ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz	Developed for flexible substrates Compatible with vinyl, polyurethane rubber, polyimide, polyester, epoxy and more	Ready to spray	Automotive, consumer electronics, telecommunications

## Ag-Coated Cu Coatings (continued)

Product	Conductivity	Attenuation	Features	Benefits	Common Uses
SCZ78300	$< 0.050 \ \Omega/\text{sq.} \ @$ 2.0 mils dry film thickness	> 75 dB from 1 MHz to 1 GHz	Excellent adhesion to most plastic substrates	Syringe dispensable	Automotive, consumer electronics, telecommunications
SCY77003	<0.025 $\Omega$ /sq. @ 2.0 mils dry film thickness	>75 dB from 1 MHz to 1 GHz @ 2.0 mils dry	Excellent adhesion to most plastic substrates	Used in applications where additional flexibility is needed	Automotive, aerospace

# Ni Coatings

Product	Conductivity	Attenuation	Features	Benefits	Common Uses
B5085	$<$ 0.200 $\Omega/\text{sq.}$ @ 2.0 mils dry film thickness	60-65 dB @ 30 MHz to 75 dB @ 1 GHz @ 2 mils dry	Excellent adhesion to acrylic PC, ABS, PC/ABS, PS, <i>Valox</i> resins and structural foams	Ideal for high-temperature applications with a max service temperature of 300° F (149° C)	Automotive
Z1636	< 2.0 Ω/sq. @ 2.0 mils dry film thickness	65 dB @ 2.0 mils dry per ASTM ES 7-83	Excellent adhesion to steel and excellent environmental corrosion resistance	Ready to spray	Automotive

# **Electrostatic Dissipative (ESD) Coatings**

Product	Conductivity	Attenuation	Features	Benefits	Common Uses
Y1365	< 2,000 Ω/sq.	N/A	Excellent adhesion to PC, ABS, PC/ ABS, PS, <i>Valox</i> -primed aluminum and structural foams	Ready to spray with 8-hour pot life	ESD protection
Y1249	$10^4$ Ω/sq. @ 2.0 mils dry and $10^8$ Ω/sq. @ 1.0 mil dry	N/A	Excellent adhesion to acrylic, PC, ABS, PC/ABS, PS, <i>Valox</i> -primed aluminum and structural foams	Ready to spray Excellent abrasion resistance for ESD application needs	ESD protection
Y1435	$10^3$ - $10^4  \Omega/\text{sq.}$ from 1-2 mils dry film thickness	N/A	Excellent adhesion to PC, ABS, PC/ ABS, PS, <i>Valox</i> -primed aluminum and structural foams	Ideal for ESD applications with higher conductivity requirements	ESD protection

#### **Thinners**

Product	Conductivity	Attenuation	Features	Benefits	Common Uses
GXS78003	N/A	N/A	N/A	Thinner for B5085	Thinner
B5092	N/A	N/A	N/A	Thinner for B5085	Thinner



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