

PPG Industrial Coatings

Electronic Materials Group

SERIES 599-Y2000

Copper Conductive Coating

Features

SERIES 599-Y2000 A sprayable metallic coating system using a specially formulated non-oxidizing copper as the conductive agent. Developed for use as an RFI and EMI shield for plastic electronic equipment housings. 599-Y2000 can be used on acrylic, ABS and structural foams, e.g. Valox, etc. as well as solvent sensitive substrates polycarbonate such and as polystyrene. For Noryl use 599-Y2000T (Y1371).

NOTE: The solvent system of this product is designed for fast drying and early measuring of conductivity. In hot, humid weather the fast drying may result in sporadic blushing. Blushing is a whitening of the surface of the coating caused by condensation of water in a hot, humid environment. The addition of 2-3% (3-4 ounces per gallon) of Butyl Cellosolve(Ethylene-Glycol-Mono-Butyl-Ether) will eliminate blushing.



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Product Description

SYSTEM:	One component, air dry.
SOLIDS:	29% ± 2% by weight.
DENSITY:	$8.5 \pm .2$ lbs. per gallon (1.02 ± 0.03 kg per liter)
VISCOSITY	@75°F ± 3°F (24°C ± 2°C): 19 ±2 Sec. (#2 EZ Viscosity Cup - Mfr. Paul N. Gardner)
ADHESION:	Excellent to most plastic substrates.
ATTENUATION:	More than 75 dB from 1 MHz to 1 Ghz.
THINNER:	Check viscosity after thorough mixing. Adjust to 19 seconds (#2 EZViscosity Cup) with MEK, if necessary.
APPLICATION METHOD:	HVLP or standard air gun with fluid recirculation system is recommended. A pressure pot may be used provided that: (1) it has a large diameter, paddle-type agitator to keep copper in suspension and (2) a short translucent MEK-resistant fluid line of 1/8" (3.15 mm) ID or smaller is used (such as Binks Synflex) to prevent settling in the line.
DRYING TIME:	30 minutes flash off at room temperature; then 30 minutes @ 160°F. (71°C.) at 2.0 mils (50 microns). Longer if thicker film, shorter if thinner film, to achieve desired resistivity.
HUMIDITY RESISTANCE:	No change in resistivity or attenuation when tested in accordance with MIL-STD-202 Method 106 - 40 cycles; MIL-STD-810 Method 507 Procedure 5 - 480 hours cycling; Meets UL Specification 746-C

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SURFACE RESISTIVITY:	<0.05 ohms/sq. @ 1 mil (25 microns) DFT. <0.025 ± 0.005 ohms/sq. @ 2 mils (50 microns) . These readings can be achieved under proper conditions: (1) properly mixed paint; (2) film is 100% dry.
THEORETICAL COVERAGE:	190.4 ft². per gallon/ 1 mil (4.7m²/liter per 25 microns) @ 100% transfer efficiency (computed on volume solids)
STORAGE LIFE:	Recommended storage in unopened containers is 12 months from date of shipment. Older material should have all Q.C. requirements rechecked before using.