PPG Aerospace
PRC-DeSoto

TECHNICAL DATA

DeSoto® Conductive Coatings

Description

DeSoto® conductive coatings are conventional solids, carbon filled, epoxy-amine coatings with controlled conductive properties. These high performance coatings are designed to obtain surface conductivity on non-conductive (composite and other plastics) substrates. Additionally, DeSoto® conductive coatings control static charge bleed-off on radomes, antennas, and other insulative parts.

DeSoto® anti-static coatings (528X306 & CA 7870) are used to bleed-off the static charge from the aircraft's radome and antennas. These coatings have a resistivity requirement between 1.0 to 100 megohms per square inch. 528X306 requires a BMS 10-79 or BMS 10-103 primer before topcoating. CA 7870 is urethane compatible therefore it does not require primer prior to topcoating.

DeSoto® conductive coating (528X310) is used on non-conductive substrates to facilitate the discharging and positive grounding of static electrical charges to the primary structure. This coating has a much higher surface conductivity, with the resistivity requirement between 0.1 to 100,000 ohms per square inch. 528X310 is urethane compatible therefore it does not require primer prior to topcoating.

DeSoto® conductive coatings are compatible with all conventional, airless, and HVLP spray equipment. For important details on the application parameters for these primers, consult the application guide for DeSoto® conductive coatings or contact your local PPG Aerospace Application Support Center.

DeSoto® conductive coatings are qualified to the following specifications:

528X306
- BAMS 565-12 Type II
- BMS 10-21 Type II
- BPS 299 947 085
- GMS 5003
- LES 1258

CA 7870
- BMS 10-21 Type IV

528X310
- BMS 10-21 Type III
- BPS 299-947-142
- BAMS 565-12 Type III

DeSoto® conductive coatings are compatible with the following primers and topcoats:

Primers
- BMS 10-79 Type II & III
- BMS 10-103
- BAMS 565-01

Topcoats
- BMS 10-60 Type I & II
- BMS 10-72 Type VIII
- BAMS 565-09 Type II
- MEP 10-069

Application Properties (Typical)

Application temperature	65°F - 95°F (18.3°C to 35°C)
Application humidity	40% - 75%
Mix ratio (by volume)	
1 part base	528X306/CA 7870/528X310
1 part curing solution	910X464
Viscosity	
Initial mix, #1 Zahn cup	30 - 40 sec.
Pot life (4 hours)	40 sec. max.
VOC, EPA method 24	700 grams/l

Dry film density
- 528X306: 0.00773 lbs/ft² at 1.0 mil dry film
- CA 7870: 0.00778 lbs/ft² at 1.0 mil dry film
- 528X310: 0.00804 lbs/ft² at 1.0 mil dry film

Theoretical coverage
- 528X306: 251 ft²/gal at 1.0 mil dry film
- CA 7870: 255 ft²/gal at 1.0 mil dry film
- 528X310: 267 ft²/gal at 1.0 mil dry film

Recommended dry film thickness
0.6 to 1.0 mils (15-25 microns)

Drying times @ 75°F (23.9°C) and 50% R.H.

Dust free	15 min. max.
Tack free	less than 2 hrs
Dry through	4 hrs
Dry to overcoat	4 to 24 hrs
Full cure	7 days

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Accelerated cure
15 minutes flash off @ 75°F (23.9°C), then 30-45 minutes at 140°F (60°C) & 5% R.H. min.

Color	Jet black
Gloss @ 60 degrees	30 units max.

Spray equipment: Compatible with conventional, airless and HVLP spray equipment

Shelf life
12 months from date of manufacture

Performance Properties (Typical)

Service temperature	
-65°F to 350°F (-54°C to 176.7°C)	Conforms
Film hardness	
F pencil minimum	Conforms
Surface resistivity	
528X306 & CA 7870	
1.0 to 100 mega ohms/square inch	
528X310	
0.1 to 100,000 ohms/square inch	
Fluid resistance	
BMS 3-11, 30 days immersion @ 75°F (23.9°C)	Conforms
Distilled H_20, 7 days @ 75°F (23.9°C)	Conforms
Fastener corrosion	
Salt spray for 250 hours	Conforms
Rain erosion (528X310 & CA 7870 only)	
385 miles per hour exposure with a 3 to 4 inch per hour water spray for 30 minutes	Conforms
Adhesion	
Cross-hatch adhesion	Conforms

Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.

Storage Life

Inspect the condition of the container to ensure compliance to FED-STD-141, Method 3011.1. The material should be stored at temperatures between 40°F to 100°F (4.4°C to 37.8°C) to ensure shelf life.

Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

Additional information can be found at:
www.ppgaerospace.com

For sales and ordering information call
1-800-AEROMIX (237-6649).

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