

DeSoto[®] CA7870 Anti-Static Coating

TECHNICAL DATA SHEET

Product Description

DeSoto[®] CA7870 anti-static coating is a conventional solids, carbon filled, epoxy coating with controlled conductive properties. CA7870 anti-static coating is used to obtain low surface conductivity on non-conductive substrates such as radomes and antennae where static charge dissipations are required.

- Bleeds off static charge
- Resistivity is 1.0 to 100 megohms per square
- Compatible with Desothane[®] HS topcoats
- Excellent adhesion to plastic surfaces
- Excellent fluid resistance
- Compatible with all current non-electrostatic spray equipment
- Can be applied in a wide range of conditions
- Service temperature -54°C to 177°C (-65°F to 350°F)

Components



Mix ratio (by volume):

- CA7870 (base component) 1 part
- 910X464 (activator component) 1 part

Specifications



CA7870 primer is qualified to:

- BMS 10-21 Type IV
- CMFS033 Type II
- CMS-CT-223

Note: PPG Aerospace recommends you check the most recent specification QPLs for updated information.

Product Compatibility:

CA7870 is compatible with the following topcoat specifications:

- BAMS 565-009
- BMS 10-60 Type I & Type II
- BMS 10-72 Type VIII
- BMS 10-125 Type III
- DPM 6456
- DPM 6546
- MEP 10-069

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Surface Preparation and Pretreatments



DeSoto® anti-static coating CA7870 can be applied over clean, dry intact plastic and composite surfaces. Thorough surface preparation and cleaning prior to applying the conductive coatings is extremely important to obtain the desired resistivity. Follow the surface preparation instructions below before applying the conductive coatings:

1. The surface of the non-conductive laminate should be lightly sanded with a 180 grit or finer sandpaper to remove the glossy finish.
2. The sanding dust should be removed by wiping with a clean rag.
3. Immediately before applying the conductive coating, wipe the surface with a clean rag and a suitable solvent such as Desoclean® 110 cleaner.

Note: The resistivity of conductive coatings is directly related to the condition of the substrate surface. Sanded and rough substrate surfaces on which the coating is applied will lower the resistivity. Smooth and glossy substrate surfaces will increase the resistivity.

Instructions for Use



Mixing Instructions:

Prior to mixing, thoroughly shake the base component. Add activator to base component and stir well, maintain constant agitation for 10 minutes to ensure proper mixing. Induction time is required.

Note: It is important to condition the paint for 24 hours prior to mixing by placing all materials in the shop or hangar, with ambient temperatures between 13° and 35°C (55° to 95°F). The minimum temperature of the paint components should be 13°C (55°F) prior to mixing.



Induction Time:

Temperature	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
Induction Time Required	45 minutes	30 minutes	15 minutes

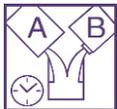
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Viscosity: (23°C/73°F)

• #1 Zahn cup	30 to 40 seconds
• #2 Zahn cup	15 to 18 seconds
• #4 Ford cup	11 to 15 seconds
• ISO 3 cup	30 to 48 seconds
• ISO 4 cup	17 to 22 seconds
• BSB3 cup	24 to 29 seconds
• BSB4 cup	14 to 17 seconds
• AFNOR #2.5 cup	41 to 53 seconds
• AFNOR #4 cup	14 to 16 seconds

Note: Viscosities quoted are the typical ranges obtained when using specified mix ratio.



Pot Life:

4 hours @ 21 - 25°C (70 - 77°F)

Note: The resistivity of these coatings slightly increases during its pot life. The resistivity of a coating sprayed during the first hour of pot life can be lower than the resistivity of a coating sprayed during the third hour of pot life.

Application Guidelines

Recommended Application Conditions:

Temperature	15 - 30°C (59 - 86°F)
Relative Humidity	30 - 60%

Application:

Ground the aircraft and the application equipment before coating. Stir the coating slowly during the application. Spray apply these coatings to a dry film thickness is 15 to 25 microns (0.6 to 1.0 mils). This can be accomplished by one medium coat with a 50% overlap.

Note: Spray technique is extremely important in controlling coating resistivity. Dry spraying will reduce resistivity and wet spraying will increase resistivity of the coating.
Note: Dry film thickness is another important variable in controlling coating resistivity. Increasing the film thickness will increase resistivity.

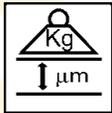
These application guidelines represent PPG's best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.

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Theoretical Coverage:

6.3 square meters/liter at 25 microns dry film (255 square feet/gallon at 1 mil dry film)
Recommended dry film thickness; 15 to 25 microns (0.6 to 1.0 mils)



Dry Film Density:

1.56 grams/cubic centimeter (12.99 pounds/gallon)

Dry Film Weight:

39 grams/square meter at 25 microns dry film (0.00778 pounds/square feet at 1 mil dry film)



Equipment:

CA7870 primer is compatible with all forms of conventional and HVLP spray equipment.

Equipment Type	Tip Size	Pot Pressure	Atomization Pressure at the Cap
High Volume Low Pressure Spray Gun (HVLP)	1.0 mm to 1.4 mm	10 to 20 psi (0.69 to 1.4 bar)	10 psi maximum (0.69 bar)
Conventional Air Spray Gun	1.2 mm to 1.8 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)

Equipment Cleaning:

Clean spray equipment as soon as possible after use. Flush spray equipment with DeSoto® CN20, DeSoto® CN44, or Desoclean™ 45 high performance solvent cleaner.

Physical Properties (product)



Color: Black



Gloss: Not Applicable

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Dry Times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
Dust Free	25 minutes	15 minutes	10 minutes
Tack Free	2 ½ hours	2 hours	1 ½ hours
Dry to Overcoat	4 - 24 hours	3 - 24 hours	2 - 24 hours
Dry Through	5 hours	4 hours	3 hours
Full Cure	7 days	7 days	7 days


VOC:

Mixed, ready to use VOC (EPA method 24)	700 grams/liter
Base Component	624 grams/liter
Activator Component	791 grams/liter


Flash point closed cup:

Base Component	-6°C (22°F)
Activator Component	-6°C (22°F)

Shelf Life:

12 months from date of manufacture to most OEM material specifications. Consult the specification to verify shelf life requirements.

24 months from date of manufacture for PRC-DeSoto Standard.

Note: Shelf life is provided for original, unopened containers.

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 Recommendations



Inspect the condition of the container to ensure compliance. The material should be stored at temperatures between 5°C to 35°C (41°F to 95°F) to ensure shelf life.

Note: When procuring to a qualified material specification, follow those storage instructions.

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Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS 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 the local PPG office at the numbers listed below:

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ASC – Australia

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