# Technical Data Sheet Aerospace Coatings



# PPG BOUNDLESS™ CA6500 Polyurethane Buffable Topcoat

## **Product description**

PPG BOUNDLESS™ CA6500 Series Polyurethane Buffable Topcoats are designed to provide excellent durability, performance, and appearance characteristics for the Light General Aviation market with minimal emissions of regulated Volatile Organic Compound (VOC) and Volatile Hazardous Air Pollutants (VoHAPS)

- Easy to apply, excellent flow and leveling properties
- VOC Content < 350 g/l</li>
- HAP's Free and Heavy Metal Free Formulations
- Resistant to Hydraulic Fluids, Lubricating Oils, Diesel Fuel and Water
- Excellent Gloss & Color Retention
- Good Buffability
- Available in metallic finish (clearcoat is required to achieve full performance properties)

## **Components**

#### Mix ratio (by volume):



CA6500 Series base component CA6500B Activator CA6500CT Series thinners 3 parts 1 part 0.50 parts

Thinner options: CA6500CT (Slow) CA6500CT1 (Standard) CA6500CT2 (Fast) CA6500CT3 (Faster)

Additives (Optional) to be added per mixed gallon

• CA6500R Brushing and roller additive See mixing instructions section for details on mix ratio of additives.

## **Specifications**



PPG BOUNDLESS CA6500 Polyurethane Buffable Topcoats are qualified to:

DeSoto Standard

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

#### **Product compatibility:**

*PPG BOUNDLESS* CA6500 Polyurethane Buffable Topcoats are compatible with Commercial, Light General Aviation and Military aerospace epoxy primers and sanding surfacers.

*PPG BOUNDLESS* CA6500 Polyurethane Buffable Topcoats is compatible with the following system for three-stage mica colors:

PPG BOUNDLESS CA6500 Special Effect Mica System

*PPG BOUNDLESS* CA6500 Polyurethane Buffable Topcoats are compatible with the following PPG Aerospace clearcoats:

- Desothane<sup>™</sup> HS CA9005 High Gloss Clearcoat
- Desothane™ HD CA9007/B900 High Gloss Clearcoat
- Desothane™ HD 9008/B900D High Gloss Clearcoat
- PPG BOUNDLESS CA6500
   Polyurethane Buffable Clearcoat

## **Surface preparation and pretreatments**



*PPG BOUNDLESS* CA6500 Polyurethane Buffable Topcoats can be applied over clean, dry, and intact epoxy primer. Refer to the technical data sheet of the primer being used for the appropriate overcoat windows.

## Instructions for use



#### Mixing instructions:

Mechanically shake the base component (Part A) thoroughly before combining to ensure all solids are completely dispersed. Add one volume of activator component (Part B) to three volumes of base component (Part A), then add half volume of thinner component (Part C). Mix by hand stirring, paint shaker or mechanical mixing to ensure the mixture is homogeneous. Shake or mechanically mix for 5 minutes.

For brush or roller application add CA6500R Brushing & roller additive to pre-mixed CA6500 coating. Mix by hand stirring, mechanical mixing or paint shake for 5 minutes maximum.

Note: Do not apply *PPG BOUNDLESS* CA6500 Polyurethane Buffable Topcoat in Metallic finish via roller application

Optional additives	Quantity to add per mixed gallon
CA6500R Brushing & roller additive	5.0 to 7.0 fl. oz.

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:

Not Required



Viscosity: (23°C/73°F)

#2 Signature Zahn cup (fresh mix)
 15 - 20 seconds

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



Pot life:	22 - 30°C (71 - 86°F)
CA6500CT	3 hours
CA6500CT1	2 hour
CA6500CT2	1 hour
CA6500CT3	45 minutes

## **Application guidelines**

#### Optimum recommended application conditions:

Temperature 15 - 30°C (59 - 86°F)

Relative humidity 20 - 75%

#### Application:

Ground the aircraft and the application equipment before top coating. Stir the topcoat slowly during the application. The recommended dry film thickness is 42.5 to 62.5 microns (1.7 to 2.5 mils). This can be accomplished by two or three medium coats with a 50% overlap. Note the first coat should be allowed to tack up before applying the second coat. If the second is applied before the first coat has tacked up, sagging may occur. If the first coat is completely dry, a heavy orange peel could result.





For for *PPG BOUNDLESS* CA6500 Buffable Topcoat in Metallic finish: remove ALL filters from the spray gun and pumps before spraying and agitate metallic paint during the application

Brush or roll application is not recommended for *PPG BOUNDLESS* CA6500 Buffable Topcoat in Metallic finish.

PPG BOUNDLESS CA6500 Polyurethane Buffable Topcoat in Metallic finish must be clearcoated in order to achieve full performance properties. Consult the Technical Data Sheet of the compatible clearcoats listed below for application details.

- PPG BOUNDLESS CA6500
   Polyurethane Buffable Clearcoat
- PPG BOUNDLESS CA6510 Polyurethane Flat Clearcoat
- Desothane<sup>™</sup> HS CA9005 High Gloss Clearcoat
- Desothane<sup>™</sup> HD 9008/B900D High Gloss Clearcoat
- Desothane™ HD CA9007/B900 High Gloss Clearcoat

If clearcoating *PPG BOUNDLESS* CA6500 Polyurethane Buffable Topcoat, the overcoat window is from Dry-to-tape (DTT) to 72 hours.

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



#### Theoretical coverage:

17.43 square meters/liter at 25 microns dry film (710 square feet/gallon at 1 mil dry film) Recommended dry film thickness; 42.5 to 62.5 microns (1.7 to 2.5 mils)



#### Dry film weight:

37.5 grams/square meter at 25 microns dry film (0.00767 pounds/square foot at 1 mil dry film)



#### **Equipment:**

*PPG BOUNDLESS* CA6500 Polyurethane Buffable Topcoats are compatible with all current forms of spray equipment.

Equipment type	Tip size	Pot pressure	Atomization pressure at the cap
Electrostatic air spray gun	1.2 mm to 1.5 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)
Electrostatic air assisted airless spray gun	#611 or #613 (Graco nomenclature)	700 to 1200 psi (48 to 82 bar)	40 to 60 psi (2.8 to 4.1 bar)
High volume low pressure spray gun (HVLP)	1.2 mm to 1.5 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 1.5 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 IS-213 Polyurethane Reducer (MIL-DTL-81772 Type I) DeSoto® CN20, DeSoto® CN44, or Desoclean 45 high performance solvent cleaner. Once material is fully cured, use an approved chemical paint removal system to strip off coating.

## **Physical properties (product)**



Color:

Available in variety of colors



Gloss 60°: 90+ gloss units for gloss colors

15 – 45 gloss units for semi-gloss colors

< 5 gloss units for flat colors

Dry times at 22 – 30°C (71 - 86°F) 50% R.H.						
Thinner component	CA6500CT	CA6500CT1	CA6500CT2	CA6500CT3		
Time between coats	40-60 minutes	35-45 minutes	20-30 minutes	15-20 minutes		
Dry to touch	4-6 hours	2-4 hours	1-2 hours	0.5-1 hour		
Dry to tape	8-14 hours	7-9 hours	5-8 hours	2-3.5 hours		
Full cure	14 days	14 days	14 days	14 days		

Note: The times listed above are dependent upon film thickness, airflow, and spray technique. Lower film thickness, better airflow, spraying "dry" will decrease the dry-to-tape, and time between coats.



Mixed, ready to use VOC (EPA method 24) for all colors is < 350 grams/liter



#### Flash point closed cup:

Base Component (Solid & Metallic) -20°C (-4°F)
Activator Component (CT1) 38.0°C (100.4°F)
23.9°C (75°F)

#### Shelf life:

24 months from date of manufacture for DeSoto Standard.

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

<u>Note:</u> 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.

## **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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