Desothane™ HS CA9321 Advanced Performance Topcoat

Product description

Desothane™ HS CA9321 advanced performance coating is a high solids, fluoropolyurethane topcoat used to protect the exterior of aircraft. These topcoats are designed to be applied over epoxy and Koroflex™ urethane primers to provide maximum protection.

- Outstanding color retention
- Exceptional appearance
- Excellent adhesion and fluid resistance
- Easy to clean
- Compatible with Desoprime™ HS, Eco-prime, and *Koroflex* primers
- Compatible with all current spray equipment
- Can be applied in a wide range of environmental conditions
- Service temperature -54°C to 177°C (-65°F to 350°F)

Components

Mix ratio (by volume):

- CA9321/FXXXXX (base component) 3 parts
- CA9300B (activator component) 1 part

Note: Faster drying bases may be used, CA9322 or CA9323

Specifications

CA9321 series topcoats are qualified to:

- MIL-PRF-85285 Type I & Type IV
- MEP 10-117 Type II

CA9321 series topcoats meet the performance requirements of:

- DMS 2115
- MMS 420

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

Product compatibility:

CA9321 series topcoats are compatible with the following primer specifications:

- DMS 1786
- MIL-P-53022
- MIL-PRF-23377
- MIL-PRF-85582
- MMS-423
- TT-P-2760

Surface preparation and pretreatments

Desothane® CA9321 can be applied over clean, dry, intact surfaces.

1. If the epoxy primer surface has surface defects such as dry spray or dust inclusions, scuff with Scotch-Brite™ pads. Then remove the dust with either a polyurethane compatible tack rag or by cleaning with a less aggressive solvent such as Desoclean 110 cleaner
2. For water reducible primers, clean sanded areas with aliphatic naphtha to remove sanding dust.

For further information, refer to the Technical Data Sheet for the above mentioned primers.

Instructions for Use

Mixing instructions:

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

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)

- #4 Ford cup 30 seconds maximum

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

Pot life:

Base	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
CA9321	5 hours	4 hours	3 hours
CA9322	3 hours	2 hours	1 hour
CA9323	2 hours	1 hour	30 minutes
CA9324	1 hour	30 minutes	15 minutes

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Application guidelines

Optimum recommended application conditions:

Temperature	15 - 30°C (59 - 86°F)
Relative Humidity	20 - 90%

Application:
Ground the aircraft and the application equipment before top coating. Stir the topcoat slowly during the application.

It is very important to maintain the wet edge during the application in order to avoid dry spots or tiger stripes. Please consult the dry time table for wet edge times.

Apply a medium wet first coat to a uniform continuous film approx. 1.5-2.0 wet mils (35-50 microns). Allow the first coat to flashoff and tackup before starting the second coat. Apply a uniform medium wet coat with a 50% overlap. The second coat can be applied wetter to a total wet film of 3.0-4.0 wet mils (75-100 microns). his can be accomplished by one or two 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.

Note: To avoid surface roughness it is important to prevent the overspray from falling into freshly painted areas. Therefore the paint should be applied in the same direction as the air flow. Also, in painting the wings the application should start at the tips and proceed toward the fuselage, and on the fuselage it should proceed from top to bottom.

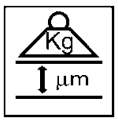
Note: A successful application of the coating not only depends on the paint, but also on the skill of the painter who applies the coating. It is the painter's responsibility to adjust their spray technique so they will know exactly how much paint to apply in order to avoid sags and runs without generating orange peel and dry spots

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:

20 square meters/liter at 25 microns dry film (850 square feet/gallon at 1 mil dry film)

Recommended dry film thickness; 50 to 75 microns (2 to 3 mils)



Dry film weight:
41 grams/square meter at 25 microns dry film (0.0084 pounds/square feet at 1 mil dry film)

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Equipment:

CA9321 is 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 or 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)	1.0 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: Available in AMS-C-STD 595 flat or any other flat color standard.

Gloss: 15 - 45 G.U at 60°

Dry Times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
CA9321 base component			
Wet edge	40 - 55 minutes	30 - 45 minutes	15 - 20 minutes
Dry to tape	7 - 8 hours	6 -7 hours	5 - 6 hours
Dry hard	14 hours	12 hours	10 hours
Dry to fly	60 hours	48 hours	36 hours
Full cure	7 days	7 days	7 days

Dry Times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
CA9322 base component			
Wet edge	20 - 30 minutes	15 - 20 minutes	10 - 15 minutes
Dry to tape	4 - 5 hours	3 - 4 hours	2 - 3 hours
Dry hard	8 hours	6 hours	4 hours
Dry to fly	48 hours	36 hours	24 hours
Full cure	7 days	7 days	7 days

Dry Times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
CA9323 base component			
Wet edge	15 - 20 minutes	10 - 15 minutes	5 - 10 minutes
Dry to tape	3 - 4 hours	2 - 3 hours	1 - 2 hours
Dry tard	6 hours	4 hours	2 hours
Dry to fly	36 hours	24 hours	18 hours
Full cure	7 days	7 days	7 days

Dry Times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
CA9324 base component			
Wet edge	10 - 15 minutes	5 – 10 minutes	5 minutes
Dry to tape	3 - 4 hours	2 - 3 hours	1 - 2 hours
Dry hard	6 hours	4 hours	2 hours
Dry to fly	36 hours	24 hours	18 hours
Full cure	7 days	7 days	7 days

Accelerated cure for CA9321:

Dry hard

Allow 60 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
followed by 4 hours at 49°C (120°F)

Full cure

Allow 60 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
followed by 24 hours at 49°C (120°F)

Note: Accelerated cure can also be achieved by using faster drying base components.

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VOC:

Mixed, ready to use VOC (EPA method 24)	420 grams/liter
Base Component	490 grams/liter
Activator Component	206 grams/liter

Flash point closed cup:

Base Component	27°C (80°F)
Activator Component	39°C (102°F)

VOHAP: 0.75 lbs./gallon

Shelf Life:

12 months from date of manufacture when stored in original unopened containers. Consult the specification to verify shelf life requirements.

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.

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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