Desothane HS CA9311 Advanced Performance Topcoat

Product description

Desothane® HS CA9311 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 epoxy and urethane 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):

• CA9311/FXXXXX (base component)	3 parts
• CA9300B (activator component)	1 part

Note: Faster drying bases may be used, CA9312, or CA9313

Specifications

CA9311 series topcoats are qualified to:

- BMS 10-145 Type I Grade D
- MEP 10-117 Type II
- MIL-PRF-85285 Type I & Type IV
- PWA 36525 Type 2

CA9311 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:

CA9311 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

Desothane HS CA9311 Advanced Performance Topcoat

Surface preparation and pretreatments

Desothane® CA9311 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:

Whites and grays 4 hours @ 21 - 25°C (70 - 77°F)
All other colors 3 hours @ 21 - 25°C (70 - 77°F)

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.

These topcoats can be applied in either two or one coat systems.

In a one-coat (crosscoat/box coat) application, apply a medium coat followed immediately by a medium wet coat applied over the same area, except done in alternating spray direction, to a total wet film of 3.0-4.0 mils (75-100 microns).

In a two-coat system, 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.

Desothane HS CA9311 Advanced Performance Topcoat

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 density:

1.64 grams/cubic centimeter (13.66 pounds/gallon)

Dry film weight:

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

Equipment:

CA9311 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: 5 G.U at 60°

Desothane HS CA9311 Advanced Performance Topcoat

Dry Times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
CA9311 Base Component			
Wet Edge	40 - 55 minutes	30 - 45 minutes	15 - 20 minutes
Dry to Tape	8 hours	7 hours	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
CA9312 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
CA9313 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 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 to dry hard when using CA9311 base component:

Allow 30 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
followed by 90 minutes at 49°C (120°F)

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

VOC

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)

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:

Asia Pacific

ASC – Australia
Tel 61 (3) 9335 1557
Fax 61 (3) 9335 3490

ASC – Japan
Tel 81 561 35 5200
Fax 81 561 35 5201

ASC – South East Asia
Tel 65 6861 1119
Fax 65 6861 6162

ASC – Suzhou
Tel (86-512) 6661 5858
Fax (86-512) 6661 6868

Europe and Middle East

ASC – Central Europe
Tel 49 (40) 742 193 10
Fax 49 (40) 742 139 69

ASC – Middle East & India
Tel (971) 4 883 9666
Fax (971) 4 883 9665

ASC – North Europe
Tel 44 (0) 1388 770222
Fax 44 (0) 1388 770288

ASC – South Europe
Tel 33 (0) 235 53 43 71
Fax 33 (0) 235 53 54 44

ASC – Tianjin
Tel (86-022) 2482 8625
Fax (86-022) 2482 8600

Americas

1 (818) 362-6711 or 1-800-AEROMIX

Desoclean, Desothane, and DeSoto are trademarks of PRC-DeSoto International, Inc.

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

PRC-DeSoto International, Inc.
12780 San Fernando Road
Sylmar, CA 91342
www.ppgaerospace.com

Issue Date: 05/19
Lit: 3054