PPG Aerospace Coatings

Desothane® HS CA8000 Polyurethane Topcoats with Andaro® Special Effect Pigments

TECHNICAL DATA SHEET

Product Description

Desothane® HS CA8000 series topcoat system with Andaro® special effect pigments is part of a multi-layer special effects coating system. The system consists of a solid or metallic base, coating with Andaro® special effect pigments, and clear coat. The system is designed to be applied over Desoprime™ epoxy primers.

- System designed to provide a deep, saturated bright color
- Excellent gloss and color retention
- Fluid resistant
- Compatible with Air Spray, HVLP spray equipment
- Service temperature -54°C to 177°C (-65°F to 350°F)

Components

Mix ratio (by volume):

Desothane® HS CA8000 solid or Metallic Color

• CA8000/XXXX (base component)	2 parts
• CA8000B (activator component)	1 part
• CA8000C (thinner component)	1 part

CA8000 topcoat with Andaro® special effect pigments

• CA8000/XXXX (base component)	2 parts
• CA8000B (activator component)	1 part
• CA8000C (thinner component)	1 part

Clearcoat - Consult the applicable Technical Data Sheet for mixing instructions.

Note: Desothane® HS multiple thinners are available based on dry time requirements: CA8000C, CA8000CT series thinners are compatible.

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Specifications

Desothane® HS CA8000 Metallic (Limited Colors) are qualified to:

- BMS 10-125 Type V Grade D

CA8000 topcoats with Andaro® special effect pigments (Limited Colors) are qualified to:

- BMS 10-125 Type V Grade D

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

Product Compatibility:

CA8000 topcoats with Andaro® special effect pigments are compatible with the following primer specifications:

- 299-947-322 Type I
- AIMS 04-04-001
- AIMS 04-04-004
- AMS 3095
- BAMS 565-008 Grade A Type II
- BAMS 565-008 Grade B Type II
- BMS 10-72 Type VIII
- BMS 10-72 Type VIII & IX Class NC
- BMS 10-79 Type II Class A Grade A
- BMS 10-79 Type II Class B Grade A
- BMS 10-103 Type I Grade A
- BMS 10-118 Type I & II Grade B
- BMS 10-123 Type I Grade B
- CMS-CT-201 Class A & B Grade A
- CMS-CT-201 Class A & B Grade B
- CMS-CT-206 Type I Class A
- DHMS C4.01 Type 3 Grade A
- DHMS C4.18 Type III Class A Grade B
- GAMPS 3103
- GP110AEE
- HMS 16-1738
- HMS 16-2122
- MEP 10-060 Type I & II Class A
- MEP 10-060 Type I & II Class B
- MEP 10-068 Class A & B
- MEP 10-070
- MM1275 Type I & II
- MS100016E Class S
- PWA 36525 Type 1
- SMS-111204 Type 1 Class 1 Form 1
- SMS-111207 Type 7
- STMGK 189
- TCE-M-20710-14
- VMS C4.01 Type 3 Grade A
- VMS C4.18 Type III Class A Grade B

Surface Preparation and Pretreatments

CA8000 high solids topcoats with Andaro® special effect pigments can be applied over clean, dry, intact urethane compatible epoxy primers listed above. Desothane® HS topcoats may be applied over the primer with no abrasion step if applied between 2 and 48 hours after priming. If it is longer, then abrade the primer surface with 320 grit red Scotch-Brite™ and clean the surface with a mild solvent such as Desoclean™ 110 solvent.

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Instructions for Use

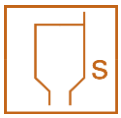
Mixing Instructions:

Prior to mixing, thoroughly shake the base component. Add the activator to the base component and stir well. Then add the thinner component also under agitation. 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:

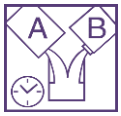
Not Required



Viscosity: (23°C/73°F)

• #2 Signature Zahn cup	18 to 22 seconds
• #4 Ford cup	14 to 17 seconds
• ISO 4mm cup	21 to 34 seconds
• BSB3 cup	29 to 36 seconds
• BSB4 cup	16 to 21 seconds
• AFNOR #2.5 cup	54 to 70 seconds
• AFNOR #4 cup	14 to 16 seconds

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



Pot Life:

Thinner	20°C (68°F)	25°C (77°F)	30°C (87°F)	35°C (95°F)
CA8000C/CT	4 hours	3 hours	2 ½ hours	2 hours
CA8000C1/CT1	2 ½ hours	2 hours	1 ½ hours	1 hour
CA8000C2/CT2	1 ½ hours	1 hour	45 minutes	30 minutes
CA8000C3/CT3	1 hour	45 minutes	30 minutes	20 minutes
CA8000C4/CT4	45 minutes	30 minutes	20 minutes	15 minutes
CA8000C5/CT5	30 minutes	20 minutes	15 minutes	12 minutes

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Application Guidelines

Recommended Application Conditions:

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

Method of application for base color including Metallics:

- Ensure all metallic containers are fully shaken and no metallic flakes remain on the bottom of the container.
- Ensure 100µm in-line filters are in place.
- Constantly agitate recommended for metallics.
- Apply one even cross coat.
- Allow to tack until sticky with slight transfer.
- Apply a second even cross coat.
- Allow to dry sticky with no transfer (maximum 8 hours).

Method of application for Andaro® tinted clear:

- Apply one even cross coat.
- Allow to flash until sticky with slight transfer.
- Apply a second cross coat.
- Allow to flash until sticky with slight transfer.
- Apply a third cross coat if necessary for color match.
- Allow to flash until sticky with no transfer prior to application of clear coat.

Clearcoat Application:

- Refer to TDS for CA8000B900, CA8800B900

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 (775 to 875 square feet/gallon at 1 mil dry film)

Recommended dry film thickness; 50 to 75 microns (2.0 to 3.0 mils)

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Dry Film Density:

1.44 grams/cubic centimeter (12.0 pounds/gallon)

Dry Film Weight:

36 grams/square meter at 25 microns dry film (0.0075 pounds/square feet at 1 mil dry film)

Note: Dry film density and dry film weight will vary by color, contact your local Application Support Center for specific color information.

Equipment:

Desothane® HS CA8000 solid/metallic base and/or HS CA8000 Andaro® topcoats are compatible with the listed 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 40 psi (0.69 to 2.8 bar)	45 to 60 psi (3.1 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 limited colors. Contact your local Application Support Center for color availability

Gloss 90+ G.U. at 60°

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Dry Times at Various Temperatures:

20°C (68°F)				
Thinners	**Dry to Tape**	**Wet Edge**	**Time Between Coats**	**Dry to Fly**
CA8000C/CT	9 - 12 hours	45 - 60 minutes	50 - 100 minutes	90 hours
CA8000C1/CT1	7 - 10 hours	25 - 40 minutes	40 - 60 minutes	65 hours
CA8000C2/CT2	4 - 5 hours	15 - 30 minutes	35 - 45 minutes	40 hours
CA8000C3/CT3	3 - 4 hours	10 - 15 minutes	30 - 40 minutes	24 hours
CA8000C4/CT4	2 - 3 hours	5 - 10 minutes	15 - 20 minutes	12 hours
CA8000C5/CT5	1 - 2 hours	3 - 5 minutes	10 - 15 minutes	8 hours
25°C (77°F)				
Thinners	**Dry to Tape**	**Wet Edge**	**Time Between Coats**	**Dry to Fly**
CA8000C/CT	8 - 12 hours	30 - 45 minutes	40 - 60 minutes	72 hours
CA8000C1/CT1	5 - 10 hours	15 - 30 minutes	30 - 45 minutes	48 hours
CA8000C2/CT2	3 - 4 hours	10 - 15 minutes	20 - 30 minutes	24 hours
CA8000C3/CT3	1 ½ - 2 ½ hours	8 - 12 minutes	15 - 20 minutes	12 hours
CA8000C4/CT4	1 - 1 ½ hours	3 - 5 minutes	10 - 15 minutes	8 hours
CA8000C5/CT5	45 - 60 minutes	2 - 4 minutes	7 - 13 minutes	6 hours

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30°C (87°F)				
Thinners	**Dry to Tape**	**Wet Edge**	**Time Between Coats**	**Dry to Fly**
CA8000C/CT	6 - 9 hours	25 - 40 minutes	40 - 55 minutes	55 hours
CA8000C1/CT1	3 - 6 hours	10 - 25 minutes	25 - 35 minutes	30 hours
CA8000C2/CT2	2 - 4 hours	8 - 15 minutes	15 - 25 minutes	18 hours
CA8000C3/CT3	1 ½ - 3 hours	6 - 12 minutes	10 - 15 minutes	10 hours
CA8000C4/CT4	45 - 60 minutes	5 - 10 minutes	8 - 12 minutes	6 hours
35°C (95°F)				
Thinners	**Dry to Tape**	**Wet Edge**	**Time Between Coats**	**Dry to Fly**
CA8000C	5 - 8 hours	20 - 30 minutes	30 - 40 minutes	36 hours
CA8000C1	3 - 5 hours	10 - 20 minutes	15 - 30 minutes	24 hours
CA8000C2	2 - 3 hours	5 - 10 minutes	10 - 20 minutes	12 hours
CA8000C3	1 - 2 hours	3 - 5 minutes	5 - 10 minutes	6 hours

Accelerated cure for dry to tape with CA 8000C:

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

Note: The cure rates of CA8000 topcoats are not affected by humidity.

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

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VOC:

Mixed, ready to use VOC (EPA method 24)	420 grams/liter
Base Component	348 grams/liter
Activator Component	113 grams/liter
Thinner Component	864 grams/liter

Flash point closed cup:

Base Component	29°C (84°F)
Activator Component	47°C (117°F)
Thinner Component	24°C (75°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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Tel 61 (3) 9335 1557
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