

Desothane[®] HS CA8000 Polyurethane Topcoat (US)

Product description

Desothane HS CA8000 series polyurethane topcoats are used to protect the exterior of aircraft. These topcoats are designed to be applied over Desoprime™ epoxy primers.

- High Solids
- Excellent adhesion to epoxy primers
- Good gloss and color retention
- Excellent fluid resistance
- Compatible with all current 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) for gloss colors:

- CA8000/XXXX (base component) 2 parts
- CA8000B (activator component) 1 part
- CA8000C/CT (flow control thinner component) 1 part

Note: Different versions of Desothane HS CA8000C/CT flow control thinners are available. See dry time table for assistance in choosing the appropriate flow control thinner for the environmental conditions and required dry times.

Note: CA1800CX or CA1805CX VOC Compliant Thinner may be added to improve spray characteristics and film appearance. See Mixing instructions section below for details

Specifications



CA8000 series topcoats are qualified to:

- AMS 3095
- A2MS 565-002 Grade B
- BAMS 565-002 Grade B
- BAMS 565-009 Grade B Type II
- BMS 10-60 Ty II Class B Grade D
- BMS 10-72 Type VIII
- BMS 10-125 Type III Grade D
- BMS 10-126 Type I Grade D
- CMS-CT-101 Type I
- DHMS C4.04 Ty VI Cl B Gr B
- DMS 2143 Ty 1 Class 1 Comp C
- DPM 6456
- GAMPS 3209
- GP110AEE
- MEP 10-069
- MS100029E Class HS
- PAI 3760
- RMS 430 Type II
- RPS 13.97 Ty II Cl L Gr B
- SMS 111207 Type 1
- VMS C4.04 Ty VI Cl B Gr B

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Qualified manufacturing sites for the following specifications are Shildon, UK and/or Gonfreville, France. Please refer to EMEA CA8000 TDS for further information.

- AIMS 04-04-012
- AIMS 04-04-013
- AIMS 04-04-024
- AIMS 04-04-031
- AIMS 04-04-032

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

Product Compatibility:

CA8000 topcoats are compatible with the following primer specifications:

- 299-947-322 Type I
- AMS 3095
- A2MS 565-008
- BAMS 565-008
- BMS 10-72
- BMS 10-79
- BMS 10-103
- BMS 10-118
- BMS 10-123
- CMS-CT-201
- CMS-CT-206
- 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
- MEP 10-068
- MEP 10-070
- MM1275 Type I & II
- MS100016E Class S
- PWA 36525 Type 1
- SMS-111204 Ty 1 CI 1 Form 1
- SMS-111207 Type 7
- STMGK 189
- TCE-M-20710-14
- VMS C4.01 Type 3 Grade A
- VMS C4.18 Ty III CI A Gr B

CA8000 topcoats are compatible with F565-4010 Intermediate coating qualified to the following specifications:

- AMS 3095
- BMS 10-120 Type I Grade A

Surface preparation and pretreatments



CA8000 high solids topcoats can be applied over clean, dry, intact urethane compatible epoxy primers, surfacers, or intermediate coating. The surface may be cleaned with DeSoto[®] CN20, DeSoto[®] CN44, or Desoclean[™] 110 solvent cleaner. Observe over coating window for primers or intermediate coating. For further information, refer to the Technical Data Sheets for the above mentioned primers and intermediate coating

Instructions for use



Mixing instructions:

Prior to mixing, thoroughly shake the base component. Add one volume of CA8000B activator component to two volumes of base component and stir well. While mixing, add one volume of CA8000C/CT series flow control thinner component and maintain constant agitation for 10 minutes. CA8000C/CT flow control thinner component must be added to ensure adequate pot life and spray properties.

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If additional thinning is required, compatible thinners are CA1800CX and CA1805CX. Add thinner as required, do not exceed 25% volume. CA1800CX/CA1805CX are zero VOC compliant thinners in the U.S. per EPA method 24. If outside of the U.S., check your local environmental regulations. Some material specifications do not allow the use of additional thinner, verify the material specification or process document prior to using. Consult CA1800CX/CA1805CX Technical Data Sheets and Safety Data Sheets for more details.

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:

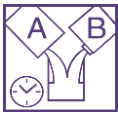
Not Required



Viscosity: (23°C/73°F)

- #2 EZ Zahn Cup 14 to 27 seconds
- #4 Ford cup 16 to 24 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

Application guidelines

Optimum recommended application conditions:

Temperature 15 - 30°C (59 - 87°F)
Relative humidity 20 - 90%

Application:

Ground the aircraft and the application equipment before top coating. Stir the topcoat slowly during the application. The suggested film thickness is 50 to 75 microns (2.0 to 3.0 mils). This can be accomplished with two medium coats with a 50% overlap. The first coat should be allowed to tack up before applying the second coat. If the first coat has not tacked up, sagging of the second coat may occur. If the first coat is dry to touch, a heavy orange peel may occur in the second coat.

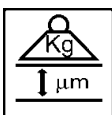
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These application guidelines represent PPG's best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.



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)



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)



Equipment: 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 a wide range of colors



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)				
CA8000C/CT	8 - 12 hours	30 - 45 minutes	45 - 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	1½ - 2½ hours	8 - 12 minutes	15 - 20 minutes	12 hours
CA8000C4/CT4	1 - 1½ hours	3 - 5 minutes	10 - 15 minutes	8 hours
CA8000C5/CT5	45 - 60 minutes	2 - 4 minutes	7 - 13 minutes	6 hours
30°C (87°F)				
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	1½ - 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)				
CA8000C/CT	5 - 8 hours	20 - 30 minutes	30 - 40 minutes	36 hours
CA8000C1/CT1	3 - 5 hours	10 - 20 minutes	15 - 30 minutes	24 hours
CA8000C2/CT2	2 - 3 hours	5 - 10 minutes	10 - 20 minutes	12 hours
CA8000C3/CT3	1 - 2 hours	3 - 5 minutes	5 - 10 minutes	6 hours

Flow control thinners may also be blended together to customize application and dry times.

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.

Accelerated cure for dry to tape with CA 8000C/CT:

Allow 30 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
followed by 60 minutes at 49°C (120°F)

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VOC

VOC:

Mixed, ready for use VOC (EPA method 24) < 420 grams/liter.

Base Component	348 grams/liter
Activator Component	113 grams/liter
C/CT Thinner Component	864 grams/liter



Flash point closed cup:

Base Component	29°C (84°F)
Activator Component	47°C (117°F)
C/CT Thinner Component	24°C (75°F)

Shelf Life:

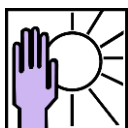
12 months from date of manufacture to most OEM material specifications. Consult the specification to verify shelf life requirements.

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.

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:

Desothane[®] HS CA8000 Polyurethane Topcoat

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

ASC – Tianjin

Tel (86-022) 2482 8625

Fax (86-022) 2482 8600

Americas

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

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

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This document has been reviewed by the PPG Aerospace Export Control Department and has been determined to contain only EAR99 controlled data

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