

Desothane™ HS CA8200 Military and Defense Topcoats

Product description

Desothane™ HS CA8200 military and defense topcoats are high solids polyurethanes used to protect the exterior of aircraft. These topcoats are designed to be applied over Desoprime™ epoxy primers and Koroflex™ urethane primers.

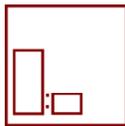
- Good gloss and color retention
- Excellent fluid resistance
- Compatible with all current spray equipment
- Can be applied in a wide range of conditions
- Service temperature -54°C to 177°C (-65°F to 350°F)

Components



Mix ratio (by volume) for gloss colors:

- CA8201/XXXXX (base component) 1 part
- CA8000D (activator component) 1 part



Mix ratio (by volume) for semi-gloss colors:

- CA8221/XXXXX (base component) 3 parts
- CA8200B (activator component) 1 part

Mix ratio (by volume) for flat colors:

- CA8211/XXXXX (base component) 3 parts
- CA8200B (activator component) 1 part

Mix ratio (by volume) for gunship matte colors:

- CA8271/XXXXX (base component) 3 parts
- CA8200B (activator component) 1 part

Specifications



CA8200 series topcoats are qualified to:

- AIMS 04-04-036
- AIMS 04-04-060
- AIMS 04-04-061
- DMS 2115 Type I
- EMS 93123
- FMC 9661-01
- GC130N
- GP110AEF
- MIL-PRF-85285 Type I & IV
- MMS-420
- RMS 176 Type II

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

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Product compatibility:

CA8200 topcoats are compatible with the following primers:

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

Surface preparation and pretreatments



CA8200 high solids topcoats can be applied over clean, dry, and intact *Desoprime And Koroflex* primers as well as the primers listed under Product compatibility section. Consult the applicable primer Technical Data Sheet for overcoat windows.

Instructions for use



Mixing instructions: Prior to mixing, thoroughly shake the base component for 10 minutes. 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:

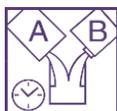
Not required



Viscosity: (23°C/73°F)

- #4 Ford cup 30 seconds maximum

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



Pot life:

Base component	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 82°F)	>29°C (>85°F)
CA82X1	4 hours	4 hours	3 hours
CA82X2	3 hours	2 - 3 hours	1 - 2 hours
CA82X3	3 hours	2 hours	1 hour
CA82X4	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.

Gloss and semi-gloss colors should be applied in a two-coat system. Flat/matte colors 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). This 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.

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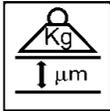


Theoretical coverage @ 25 microns/1 mil dry film

Gloss colors: 20 square meters/liter (825 square feet/gallon)

Semi-gloss, flat and gunship matte: 20 square meters/liter (820 square feet/gallon)

Recommended dry film thickness; 50 to 100 microns (2.0 to 4.0 mils)



Dry film weight:

Gloss colors: 37 grams/square meter at 25 microns dry film (0.0075 lbs./gallon at 1 mil dry film)

Semi-gloss, flat, and gunship matte colors: 41 grams/square meter at 25 microns dry film (0.0084 lbs./gallon at 1 mil dry film)



Equipment:

CA8200 high solids military 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 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 gloss, semi-gloss, flat, or gunship matte using AMS-C-595 color chips, other color codes and custom colors.



Gloss: Gloss colors, 90+ G.U at 60°
Semi-gloss colors, 15 - 45 G.U at 60°
Flat or matte colors, <10 G.U at 85°
Gunship matte colors <2 G.U. at 85°

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Dry times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
CA82X1 base component			
Dry to tape	8 - 10 hours	5 - 7 hours	3 - 4 hours
Dry hard	14 hours	12 hours	10 hours
Dry to fly	56 hours	48 hours	40 hours
Time btw coats	60 - 90 minutes	45 - 60 minutes	30 - 45 minutes
Wet edge			
Gloss	60 minutes	60 minutes	45 minutes
Semi-gloss	45 minutes	45 minutes	20 minutes
Flat/matte	30 minutes	30 minutes	15 minutes
CA82X2 base component			
Dry to tape	5 - 7 hours	3 - 5 hours	2 - 3 hours
Dry hard	12 hours	10 hours	8 hours
Dry to fly	48 hours	40 hours	32 hours
Time btw coats	30 - 40 minutes	15 - 30 minutes	10 - 20 minutes
Wet edge			
Gloss	60 minutes	45 minutes	30 minutes
Semi-gloss	45 minutes	30 minutes	20 minutes
Flat/matte	20 minutes	15 minutes	10 minutes
CA82X3 base component			
Dry to tape	4 - 5 hours	2 - 3 hours	1 - 2 hours
Dry hard	10 hours	8 hours	6 hours
Dry to fly	40 hours	32 hours	24 hours
Time btw coats	25 minutes	10 - 20 minutes	10 minutes
Wet edge			
Gloss	25 minutes	20 minutes	15 minutes
Semi-gloss	50 minutes	15 minutes	10 minutes
Flat/matte	15 minutes	10 minutes	10 minutes
CA82X4 base component (recommended for			
Dry to tape	1 ½ - 2 hours	1 hour	20 minutes
Dry hard	8 hours	6 hours	4 hours
Dry to fly	32 hours	22 hours	18 hours
Time btw coats	10 minutes	5 - 10 minutes	5 minutes

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Accelerated cure for dry hard, CA82X1:

Allow 1 hour flash off at 24°C (75°F)

followed by 4 hours at 49°C (120°F)

Note: The cure rates of CA8200 topcoats are not affected by humidity.

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.

VOC

VOC:

Mixed, ready to use VOC (EPA method 24) for all gloss, semi-gloss, and flat colors is 420 grams/liter.

Gloss colors

Base component 304 grams/liter

Activator component 485 grams/liter

Semi-gloss colors

Base component 482 grams/liter

Activator component 206 grams/liter

Flat/matte colors

Base component 470 grams/liter

Activator component 206 grams/liter



Flash point closed cup:

Gloss colors

Base component 27°C (80°F)

Activator component 29°C (84°F)

Semi-gloss colors

Base component 27°C (80°F)

Activator component 39°C (102°F)

Flat/matte colors

Base component 27°C (84°F)

Activator component 39°C (102°F)

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VOHAP:

Gloss colors	0.80 lbs./gallon
Semi-Gloss, Flat and Gunship matte colors	0.03 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:

Desothane™ HS CA8200 Military and Defense Topcoats

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

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

Americas

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

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