

# Desothane<sup>®</sup> HS CA8100 Series Military and Defense Anti-Chafe Topcoats

## TECHNICAL DATA SHEET

### Product Description

Desothane<sup>®</sup> HS CA8100 series military and defense anti-chafe topcoats are Teflon-filled polyurethanes. These topcoats are primarily used on surfaces where abrasion resistance, low friction, and impact resistance is required to reduce chafing and wear.

- Excellent gloss and color retention
- Compatible with Desoprime<sup>®</sup> HS primers
- 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:

- CA8100/XXXX (base component) 1 part
- CA8100 (activator component) 1 part



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

- CA8120/XXXX (base component) 2 parts
- CA8110D (activator component) 1 part

#### Mix ratio (by volume) for flat colors:

- CA8110/XXXX (base component) 2 parts
- CA8110D (activator component) 1 part

### Specifications



CA8100 series topcoats are qualified to the following material specifications:

- BMS 10-86 Type IV
- GC130RJ
- SS8869
- SS8870
- MS-432

CA8100 series topcoats are listed on the following process standard:

- PS 13555

*Note: PPG Aerospace recommends you check the most recent process standard for updated information.*

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## Product Compatibility:

CA8100 topcoats are compatible with the following primer specifications:

- BMS 10-79 Type II & Type III
- DMS 1786
- DMS 2104
- DMS 2144
- MIL-PRF-23377
- MIL-PRF-85582
- MMS 415
- MMS 423
- MMS 425
- TT-P-2760

## Surface Preparation and Pretreatments



CA8100 anti-chafe topcoats can be applied over clean, dry, intact epoxy primers, urethane primer, or polyurethane topcoats. They may be applied over primer or topcoat with no abrasion step if the coating was applied between 4 and 48 hours earlier. If it is longer than 48 hours, abrade the surface and then clean with Desoclean™ 110 solvent cleaner.

## 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

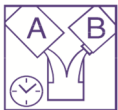
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## Viscosity: (23°C/73°F)

• #1 Zahn cup	49 seconds maximum
• #2 Zahn cup	25 seconds maximum
• #4 Ford cup	17 seconds maximum
• ISO 3	64 seconds maximum
• ISO 4	30 seconds maximum
• BSB3 cup	22 seconds maximum
• BSB4 Cup	20 seconds maximum
• AFNOR # 2.5 cup	66 seconds maximum
• AFNOR #4 cup	19 seconds maximum

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



## Pot Life:

Whites and grays 3 hours @ 21 - 25°C (70 - 77°F)  
All other colors 2 hours @ 21 - 25°C (70 - 77°F)

## Application Guidelines

### 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. The suggested film thickness is 125 to 250 microns (5 to 10 mils). This can be accomplished by spraying three or four coats of anti-chafe coating. The previous coat should be allowed to tack up before applying the next coat. If rolling instead of spraying, apply the next coat after the previous coat has tacked up.

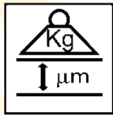
*These application guidelines represent PPG's best advice for usage in standard conditions. Some parameters will be influenced by environmental conditions, equipment, and other variables.*

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### Theoretical Coverage:

22 square meters/liter at 25 microns dry film (850 square feet/gallon at 1 mil dry film)  
Recommended dry film thickness; 125 to 250 microns (5 to 10 mils)



### Dry Film Density

1.56 grams/cubic centimeter (13.0 pounds/gallon)

### Dry Film Weight:

39 grams/square meter at 25 microns dry film (0.0070 pounds/square feet at 1 mil dry film)



### Equipment:

CA8100 series 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<sup>®</sup> CN20, DeSoto<sup>®</sup> CN44, or Desoclean<sup>™</sup> 45 high performance solvent cleaner.

## Physical Properties (product)



**Color:** Can be matched to any color standard



**Gloss:** Gloss colors, 70 G.U at 60°  
Flat colors, <5 G.U at 60°  
Semi-gloss colors, 15 - 45 G.U at 60°

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Dry Times	13 - 21 °C (55 - 70 °F)	22 - 28 °C (71 - 84 °F)	>29 °C (>85 °F)
For all Glosses			
Dry Hard	11 hours	10 hours	9 hours
Dry to Fly	65 hours	48 hours	38 hours
Full Cure	7 days	7 days	7 days

Accelerated cure for dry hard:

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

*Note: Faster drying version also available.*

## VOC

### VOC (EPA method 24):

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

#### Gloss Colors

Base Component 289 grams/liter  
Gloss Activator Component 423 grams/liter

#### Semi-Gloss Colors

Base Component 457 grams/liter  
Activator Component 327 grams/liter

#### Flat Colors

Base Component 457 grams/liter  
Flat Activator Component 327 grams/liter



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## Flash point closed cup:

### Gloss Colors

Base Component 27 °C (80 °F)

Activator Component 27 °C (80 °F)

### Semi-Gloss Colors

Base Component 27 °C (80 °F)

Activator Component 27 °C (80 °F)

### Flat Colors

Base Component 27 °C (80 °F)

Activator Component 27 °C (80 °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](http://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

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Tel 81 561 35 5200  
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Fax (86-512) 6661 6868

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PPG-DeSoto International, Inc.  
12780 San Fernando Road  
Sylmar, CA 91342

[www.ppgaerospace.com](http://www.ppgaerospace.com)

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