PPG Aerospace Coatings

Desothane® HD 9008 SR Solar Reflective Basecoat

TECHNICAL DATA SHEET

Product Description

Desothane® HD 9008 SR Solar Reflective basecoat is formulated to reduce solar heating associated with dark topcoats by being transparent to the near IR portion of the solar radiation spectrum. To obtain the solar reflective properties, Desothane® HD 9008 SR Solar Reflective basecoat needs to be applied over Desoprime™ white epoxy primer or Desothane® HD 9008 white basecoat. This system allows airlines and operators the option of using dark colors for customized liveries or paint schemes. Desothane® HD 9008 SR Solar Reflective basecoats are part of a basecoat clearcoat system and requires the use of Desothane® HD 9008/B900D Clearcoat. The completed (BCCC) basecoat / clearcoat system provides extended service life, improved buffability, and a smooth, easy to clean surface.

- Reduces solar heating of dark topcoats on composite and aluminum based substrates
- Fuselage skin temperatures can be lowered by 11.1°C to 13.8°C (20°F to 25°F)
- High solids, low VOC
- Opacity of basecoat achieved in one coat
- Can be applied in a wide range of conditions
- Compatible with all current spray equipment
- Outstanding appearance
- Excellent impact and erosion resistance
- Skydrol® resistant
- Retains gloss and color in harsh exterior environments
- May be buffed to remove minor imperfections
- Service temperature -54°C to 177°C (-65°F to 350°F)
- Reduction in weight and cycle times

Components

Mix Ratio (by volume)

• 9008SRxxxx (Base)	4 parts
• 9008B (Activator)	1 part
• 9008C (Slow Reducer)	1 part
or	
• 9008C2 (Reducer)	
or	
• 9008C4 (Fast Reducer)	

Desothane® HD 9008 SR Solar Reflective Basecoat

Specifications

9008 SR with 9008/B900D Clearcoat meets the performance requirements of the following specifications:

- AIMS 04-04-025
- AIMS 04-04-033
- AIMS 04-04-037
- AMS 3095
- BAMS 565-009
- BAMS 565-019
- BMS 10-60 Type II
- BMS 10-72 Type VIII
- BMS 10-125 Type III Grade D
- BMS 10-126 Type I Grade D
- CMFS 037
- DHMS C4.04
- GAMPS 3209
- MEP 10-069
- MM 1276
- Raytheon
- PAI 3760
- VMS C4.04

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

Product Compatibility:

9008 SR basecoats are compatible with the following primer specifications:

- 299-947-322 Type I
- AMS 3095
- BAMS 565-008 Grade A & B Type II
- BMS 10-72 Type VIII & IX Class NC
- BMS 10-79 Type II & III
- 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 & 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 & 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 3 Class A Grade B

Desothane® HD 9008 SR Solar Reflective Basecoat

Surface Preparation and Pretreatment

9008 SR high solids basecoat can be applied over clean, dry, intact urethane compatible epoxy primers such as CA7502W or CA7502EW, or Desothane® HD 9008 basecoats. The surface may be cleaned with DeSoto® CN20, DeSoto® CN44, or Desoclean™ 110 solvent cleaner. Observe over coating window for primers or 9008 basecoats. For further information, refer to the Technical Data Sheets for the above mentioned primers and 9008 polyurethane basecoats.

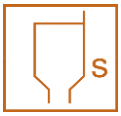
Instructions for Use

Base may require mechanical agitation. Ensure all components are adequately dispersed. Add activator to base component and mix thoroughly. Add reducer while continuing to stir until uniform.

Note: All products and components should be placed in ambient conditions of 15-30°C (59-86°F) for at least 24 hours prior to mixing and application.

Induction Time:

Not required



Viscosity: (23°C/73°F)

- AFNOR4 cup 18 - 24 seconds
- BSB3 cup 35 - 46 seconds
- BSB4 cup 20 - 25 seconds
- FORD4 cup 16 - 22 seconds
- ISO4 cup 32 - 43 seconds
- #2 Signature ZAHN cup 18 - 25 seconds

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

Pot Life:

Pot Life	Using 9008C	Using 9008C2	Using 9008C4
Pot Life @ 23°C (73°F)	N/A	2 hours	1 hour
Pot Life @ 30°C (86°F)	2 hours	N/A	N/A

Desothane® HD 9008 SR Solar Reflective Basecoat

Application Guidelines

Recommended Application Conditions:

Relative Humidity 30-75%	Using 9008C	Using 9008C2	Using 9008C4
Temperature	> 30°C (86°F)	15-30°C (59-86°F)	15-23°C (59-73°F)

Application:

To obtain solar reflective properties, 9008 SR basecoat must be applied over Desoprime™ CA7502W white epoxy primer or over Desothane® HD 9008 polyurethane white basecoat. CA7502W primer should be applied in one box coat to obtain a dry film thickness of 22.5 to 30 microns (0.9 to 1.2 mils) Consult the Desoprime™ CA7502W Technical Data Sheet for application details. When using a primer other than Desoprime™ CA7502W, apply an undercoat of Desothane® HD 9008/B70846 or 9008/I1050 to a dry film thickness of 30 to 50 microns (1.2 to 2.0 mils) to achieve the required color opacity. If applying Desothane® HD 9008 in a shade of white other than those listed above, it may be necessary to apply to a dry film thickness of 50 to 75 microns (2.0 to 3.0 mils) to achieve the required color opacity. Consult the Desothane® HD 9008 Technical Data Sheet for application details.

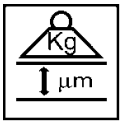
Ground the aircraft and the application equipment before topcoating. Stir the basecoat slowly during the application. Apply one cross coat (cross coat definition - apply one medium wet horizontal and one medium wet vertical coat) to a dry film thickness of 30-50 microns (1.2 to 2 mils). If two coats are required to reach opacity, apply second coat between 15 minutes to 2 hours after the first coat.

Theoretical Coverage:

22 m²/Lt @ 25 µm dry film (896 ft²/US gal @ 1 mil dry film)

Recommended Dry Film Thickness:

30 - 75 µm depending on color
1.2 – 3.0 mils depending on color



Dry Film Density:

1.9 g/cm³ (white)
15.8 lbs./US gal

Dry Film Weight:

38.5 g/m² @ 25 µm dry film thickness
0.0075 lbs./ft² @ 1.0 mil dry film thickness

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

Desothane® HD 9008 SR Solar Reflective Basecoat

Equipment:

Equipment Type	Tip Size	Flow Rate	Pot Pressure	Atomization Pressure at the Cap
Electrostatic Air Spray Gun	1.2 mm to 1.5 mm	240-350 ml/min (8-12oz./min)	10 to 40 psi (0.69 to 2.8 bar)	45 to 60 psi (3.1 to 4.1 bar)
Electrostatic Air Assisted Airless Spray Gun	611 through 612 711 through 713	240-350 ml/min (8-12oz/min)	700 to 1200 psi (48 to 82 bar)	40 to 60 psi (2.8 to 4.1bar)
High Volume Low Pressure Spray Gun (HVLP)	1.2 mm to 1.5 mm	240-350 ml/min (8-12 oz./ min)	10 to 20 psi (0.69 to 1.4 bar)	10 psi maximum (0.69 bar)
Conventional Air Spray Gun	1.2 mm to 1.5 mm	240-350 ml/min (8-12 oz./ min)	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)
Low Volume Low Pressure Spray Gun (LVLP)	1.2 mm to 1.5 mm	240-350 ml/min (8-12 oz./ min)		29 psi (2 bar)

Note: Contact your local PPG Technical Service Representative for information on use of alternative application equipment.

Equipment Cleaning:

Clean spray equipment before use and as soon as possible after use. DeSoto® CN20, CN44, Desoclean™ 45 or PPG MB28 solvent cleaners are recommended.

Physical Properties

Color:

Wide range of dark colors available

Gloss:

≥ 90 units with a 60° head (when overcoated with 9008B0900D clearcoat)

Desothane® HD 9008 SR Solar Reflective Basecoat

DRYING TIMES	Using 9008C	Using 9008C2	Using 9008C4
Dry to Tape @ 23°C (73°F)	N/A	2-3 hours	1-1.5 hours
Dry to Tape @ 30°C (86°F)	1.5-2.5 hours	1-2 hours	N/A
Sagging Limit @ 15°C (59°F)	N/A	NP	No run up to 30µm above IHP
Sagging Limit @ 23°C (73°F) & 55% RH	N/A	No run up to 30µm above IHP	No run up to 30µm above IHP
Sagging Limit @ 30°C (86°F) & 80% RH	No run up to 30µm above IHP	No run up to 30µm above IHP	N/A

DRYING TIMES	Using 9008C2 @ 23°C (73°F) 50% R.H.	Using 9008C2 @ 30°C (86°F) 85% R.H.	Using 9008C @ 35°C (95°F) 50% R.H.
Dry to Tape	2 to 3 hours	1 to 2 hours	2 to 2.5 hours
Overcoatable with 9008B0900D	2 to 3 hours (min.) 5 days (max.)	1 to 2 hours (min.) 5 days (max.)	2 to 3 hours (min.) 5 days (max.)
Full Cure	7 days	7 days	7 days

***Note**: Wait a minimum of 3 hours prior to applying Pre-mask to prevent solvent entrapment.*

***Note:** Drying times listed above are dependent upon film thickness applied, air flow conditions and application technique.*

Flash Off Time:

5 - 15 minutes flash off prior to force dry

VOC: (ASTM)

Mixed ready for use	335 g/Lt
9008SRxxxx Base Component	350 g/Lt
9008B Activator	110 g/Lt
9008C Reducer	870 g/Lt
9008C2 Reducer	870 g/Lt
9008C4 Reducer	870 g/Lt

Flash Point:

9008SR Base Component	33°C (91°F)
9008B Activator	47°C (116°F)
9008C Reducer	-1°C (30°F)
9008C2 Reducer	-1°C (30°F)
9008C4 Reducer	-1°C (30°F)

Desothane® HD 9008 SR Solar Reflective Basecoat

Shelf Life:

9008SR Base Component	24 months in original unopened container
9008B Activator	24 months in original unopened container
9008C Reducer	24 months in original unopened container
9008C2 Reducer	24 months in original unopened container
9008C4 Reducer	24 months in original unopened container

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.

PPG Aerospace Coatings

Desothane® HD 9008 SR Solar Reflective Basecoat

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

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

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

Issue Date: 07/17
Lit: 4566