SUR-PREP® AP-1

Product description:

PAINT ADHESION PROMOTER

"SPECIALIZED FUNCTION COATING FOR THE REACTIVATION OF PAINT"

FEATURES:

- An adhesion promoter that can be used in the place of scuff sanding between coats of paint
- A specialized function coating for applications called out per specification BMS 10-127

KEY BENEFITS:

- Reactivates the surface of the paint for subsequent coats to be applied
- Enhances adhesion of paint used for stenciling to topcoats
- Increases adhesion between the basecoat and clearcoat coatings of new basecoat/clearcoat systems

SPECS:

- Boeing BAC 5308 Application of Stencil and Insignia Markings
- Boeing BMS 10-127 QPL (Specialized Function Coating for Paint Applications)
- Boeing BAC5983 Application of Laminar Flow Final Coatings
- Boeing BAC5845 Application of Polyurethane Topcoat
- Boeing BAC5098 Application of Graphics Transfer System for Marking
- Boeing BAC5305 Application of Aluminum Foil Markers
- Boeing BAC5705 Application of Floor Covering Materials
- Boeing BAC5075 Application of Aircraft Exterior Decorative Finishes

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SPECS (CONTINUED FROM PAGE 1):

- Boeing BAC5312 Application of Plastic Film Markers
- Boeing D6-1816 (Called out on Process Document for Decorative Finishing of Airplane Exteriors)
- NSN 8010-01-600-2254 (11 fl oz (325 mL) Can)
- NSN 8010-01-646-1109 (Pint (473 mL) Kit)
- T.O. 1C-130A-23
- T.O. 1C-130J-23

APPLICATIONS:

- ✓ Use **Sur-Prep® AP-1** during production painting between the primer and the topcoat
- ✓ **Sur-Prep® AP-1** can be used on radome polyurethane boots prior to topcoat application and application over composite parts to provide a continuous surface energy for painting.
- ✓ The **Sur-Prep® AP-1** aerosol can be used in conjunction with the **Formit®** extensions to provide targeted spray to areas that are difficult to reach but need to be coated. Please refer to the **Formit®** technical data sheet for more information.
- ✓ **Sur-Prep® AP-1** is sprayed as a thin and wet film to dampen the substrate being sprayed.
- ✓ Application is performed using standard paint application methods, such as HVLP guns, air assisted airless spray guns, and electrostatic spray equipment.
- ✓ Coverage is typically 600 to 1000 ft^2 /gal (15 to 25 m^2 /l) and fly away weight is typically less than 0.2 lb/1000 ft^2 (1 kg/1000 m^2).
- ✓ When **Sur-Prep® AP-1** is applied, the promoter forms a fine, whitish-gray powder and is easily detectible as it reduces the 60° surface gloss of the topcoat from 90 to below 10.
- ✓ Once applied, the surface coated with **Sur-Prep® AP-1** shall not be touched or disturbed prior to application of any subsequent coating.
- ✓ Gloss reduction disappears upon application of the subsequent coats and does not affect the appearance in any way.
- ✓ Store **Sur-Prep® AP-1** at 40°F to 100°F (4°C – 38°C) away from sunlight

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BULK APPLICATION STEPS:

1) Mix **2-part** kit. Mix when temperatures are between 65°F and 90°F (18°C and 32°C).
   A) Pour **Part A** into **Part B** container
   B) Reseal the **Part B** container and shake for 5 minutes
   C) There is no induction time for **Sur-Prep® AP-1**. Pot life of **Sur-Prep® AP-1** is 24 hours. If white particles are noticed in **Sur-Prep® AP-1** after it was mixed, discard the product and make a fresh mix.
   D) Pour mixture into used container. Keep used container covered until ready for application
2) Apply with HVLP, air assisted, airless, or electrostatic paint gun.
3) Apply as a thin film making sure to wet the surface (gloss on paint surface will change).
4) Apply next decorative paint coat or stencil paint within 24 hours. The pot life of the mixed bulk **Sur-Prep® AP-1** is 10 hours if the containers are covered to prevent moisture ingression.
5) Once applied, the surface coated with **Sur-Prep® AP-1** shall not be touched or disturbed prior to application of any subsequent coating.
6) Clean spray equipment with methyl propyl ketone (MPK) or 70/30 MPK/methyl ethyl ketone (MEK) mixture.
7) Allow the film to dry 30 minutes for large area and 15 minutes for stencil use.

Note: Sur-Prep® AP-1 Part A and **Part B** should not be mixed as partial kits because **Sur-Prep® AP-1** absorbs moisture from the air and can contaminate the compound. When **Sur-Prep® AP-1 Part A** receives moisture, a slight particulate form in the liquid will be seen. For **Sur-Prep® AP-1 Part B**, there will be no change in the liquid even if moisture is absorbed. If **Sur-Prep® AP-1 Part A** is mixed in with **Sur-Prep® AP-1 Part B** when moisture is present in **Part B**, then there will be a slight precipitate form in the **Sur-Prep® AP-1**. If there is cloudiness in the **Sur-Prep® AP-1 Part A** or the **Sur-Prep® AP-1 Part A** and **Part B** materials combined, then the **Sur-Prep® AP-1 Part A** and **Part B** must be discarded. The mix ratio for **Sur-Prep® AP-1** should be **6.3 parts by weight** of **Sur-Prep® AP-1 Part B** to **1 part by weight** of **Sur-Prep® AP-1 Part A**.

AEROSOL APPLICATION STEPS:

1) Shake aerosol can for 10-15 seconds
2) Apply a thin film and wetting the surface (*gloss on paint surface will change*)
3) Allow film to dry 30 minutes for large area and 15 minutes for stencil use
4) Apply next decorative paint coat or stencil paint within 24 hours
5) Once applied, the surface coated with **Sur-Prep® AP-1** shall not be touched or disturbed prior to application of any subsequent coating.

Note: If any defects occur during application (runny or areas are heavily dampened), dry the area with compressed air. Remove the dried powder using a solvent, such as MPK or 70/30 MPK/MEK mixture or by using a tack rag. Reapply a thin wet film of **Sur-Prep® AP-1**. If the second coat of paint is not applied over **Sur-Prep® AP-1** within 24 hours, remove the dried powder using a solvent, such as MPK or a 70/30 MPK/MEK mixture. A tack rag can also be used as well. Re-apply a thin and wet film of **Sur-Prep® AP-1**.

See humidity and temperature chart on the next page for information on the humidities and temperatures that **Sur-Prep® AP-1** can be applied at.

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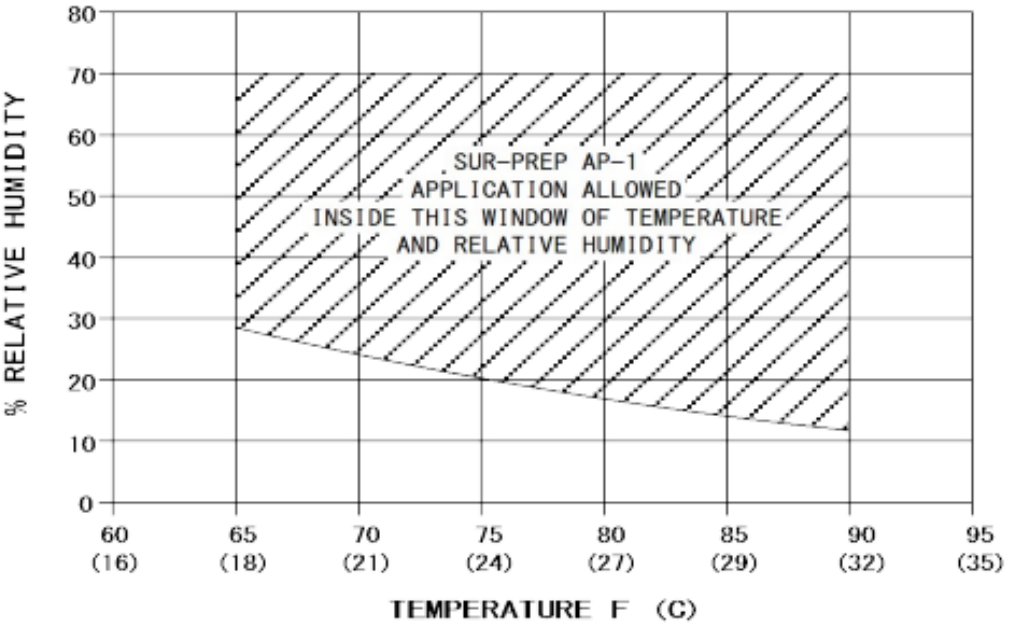
TEMPERATURE AND HUMIDITY RANGE GRAPH FOR APPLYING SUR-PREP® AP-1 :



NOTE: THE TEMPERATURE AND HUMIDITY RANGES SHOWN ARE THE LIMITS FOR APPLICATION TO ASSURE OVERCOAT TOPCOAT ADHESION. THESE LIMITS DO NOT TAKE INTO ACCOUNT EQUIPMENT CONTROL TOLERANCES. DEPENDING ON EQUIPMENT SET POINT ACCURACY, IT MAY BE NECESSARY TO SET CONTROL LIMITS INSIDE THE LIMITS SHOWN IN THIS FIGURE.

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APPLICATION CONDITIONS FOR CONVENTIONAL PAINT SYSTEMS:

Sur-Prep® AP-1 should be applied when application temperatures are between 65°F and 90°F (18°C and 32°C) with a relative humidity of <70%. The table below shows the topcoats cured between 65°F and 90°F (10°C and 32°C) that can be chemically reactivated with **Sur-Prep® AP-1**.

TOPCOAT BASE AND CURING SOLUTION COMPONENT	PREVIOUSLY APPLIED TOPCOAT	PREVIOUSLY APPLIED TOPCOAT THINNER	SUBSEQUENTLY APPLIED TOPCOAT
Akzo Nobel: * 24F20-101/PC-226 * Eclipse ECL-G Series * ECT Series * Nobel Eclipse ECL - SG-XX Series * Eclipse ECL-F-XXX Series * 10P20-44MNF/EC-291B/TR-114 **PRC Desoto:** * Desothane HS CA 8000 * Desothane HS CA8020 * Desothane HS CA8010 * CA 7700 A/B/C * CA 7502 A/B/C * Desothane HS CA 8800 **(CA 8000) (Note 3)**	All Colors, Not Clears (**Note 5)**	CA8000C, CA8000C1, CA8000C2, or any blend of these thinners	All Colors or Clears
Sky Hullo	All Colors or Clears (**Note 1)**	IS 900 Ty III	All Colors
Akzo Nobel: * 24F20-101/PC-226 * Eclipse ECL-G Series * ECT Series * Nobel Eclipse ECL-SG-XX Series * Eclipse ECL-F-XXX Series * 10P20-44MNF/EC-291B/TR-114 * Aerodur 3002 * Eclipse ECL-F Series **PRC Desoto:** * Desothane HS CA8000 * Desothane HS CA8020 * Desothane HS CA8010 * CA 7502A/B/C * Desothane HS CA 8800 **(Eclipse) (Note 4)**	All Colors or Clears (**Note 1)**	TR-109 or TR-112 (**Note 2)**	All Colors or Aerodur 3002 Clearcoats (**Note 6)**

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PAINT ADHESION PROMOTER

"SPECIALIZED FUNCTION COATING FOR THE REACTIVATION OF PAINT"

APPLICATION CONDITIONS FOR CONVENTIONAL PAINT SYSTEMS NOTES:

Note 1: Previously applied topcoat shall be overcoated within 72 hours after its application.
Note 2: The volume of TR-112 thinner used shall not exceed one part of TR-112 to four parts of TR-109.
Note 3: Applicable to Desothane HS CA 8000 series only.
Note 4: Applicable to Eclipse ECL-G series only.
Note 5: Application of **Sur-Prep® AP-1** over CA 8000 Clear may result in poor adhesion of the subsequent topcoat (Color or Clear).
Note 6: Application of **Sur-Prep® AP-1** between Eclipse (Color or Clear) topcoat and subsequently applied Eclipse Clear topcoat may result in hazing appearance issues. No appearance defects, such as hazing, occur when Aerodur 3002 clearcoat is applied over **Sur-Prep® AP-1**.
Note 7: Once applied, the surface coated with **Sur-Prep® AP-1** shall not be touched or disturbed prior to application of any subsequent coating.

The table below and the next shows the topcoats cured above 90°F (32°C) that can be chemically reactivated with **Sur-Prep® AP-1**.

APPLICATION CONDITIONS FOR CONVENTIONAL PAINT SYSTEMS TABLE:

TOPCOAT BASE AND CURING SOLUTION COMPONENT	PREVIOUSLY APPLIED TOPCOAT	PREVIOUSLY APPLIED TOPCOAT THINNER	MAX CURE LIMIT ABOVE 90°F (32°C) OF PREVIOUSLY APPLIED TOPCOAT	SUBSEQUENTLY APPLIED TOPCOAT
Akzo Nobel: * 24F20-101/PC-226 * Eclipse ECL-G Series * ECT Series * Nobel Eclipse ECL-SG-XX Series * Eclipse ECL-F-XXX Series * 10P20-44MNF/EC-291B/TR-114 **PRC Desoto:** * Desothane HS CA8000 * Desothane HS CA8020 * Desothane HS CA8010 * CA 7502A/B/C * Desothane HS CA 8000 * Desothane HS CA 8800 (Eclipse) (**Note 4**)	All Colors, Not Clears (**Note 6**)	CA8000C, CA8000C1, CA8000C2, or any blend of these thinners	**Unlimited hours**-Cure not to exceed 180°F (82°C) **(Note 5)**	All Colors or Clears

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APPLICATION CONDITIONS FOR CONVENTIONAL PAINT SYSTEMS TABLE (CONTINUED FROM PAGE 6):

TOPCOAT BASE AND CURING SOLUTION COMPONENT	PREVIOUSLY APPLIED TOPCOAT	PREVIOUSLY APPLIED TOPCOAT THINNER	MAX CURE LIMIT ABOVE 90°F (32°C) OF PREVIOUSLY APPLIED TOPCOAT	SUBSEQUENTLY APPLIED TOPCOAT
PRC Desoto: * Desothane HS CA8000 * Desothane HS CA8020 * Desothane HS CA8010 * CA 7700 A/B/C * CA 7502 A/B/C * Desothane HS CA 8800 * Desothane HS CA 8000 (**Note 3)**	All Colors, Not Clears (**Note 6)**	CA8000C, CA8000C1, CA8000C2, or any blend of these thinners	**Unlimited hours-**Cure not to exceed 180° F (82°C) **(Note 5)**	All Colors or Clears
Akzo Nobel: * 24F20-101/PC-226 * Eclipse ECL-G Series * ECT Series * Nobel Eclipse ECL- SG-XX Series * Eclipse ECL-F-XXX Series * 10P20-44MNF/EC-291B/TR-114 * Aerodur 3002 * Eclipse ECL-F Series **PRC Desoto:** * Desothane HS CA8000 * Desothane HS CA8020 * Desothane HS CA8010 * CA 7502A/B/C * Desothane HS CA 8000 * Desothane HS CA 8800 (Eclipse) (**Note 4)**	All Colors or Clears (**Note 1)**	TR-109	**12 Hours-**Cure not to exceed 105°F (41°C) **8 Hours-**Cure exceeds 105°F (41°C), but not to exceed 120°F (49°C) **8 Hours-**Cure not to exceed 105°F (41°C)	All Colors or Aerodur 3002 Clearcoats **(Note 7)**
Sky Hullo	All Colors	IS 900 Ty III	**8 Hours-**Cure not to exceed 120°F (49°C)	All Colors
PRC Desoto: Desothane HS CA 8800	All Colors or Clears	CA8880CTP or CA8800CTP1 or CA8800CTR	**12 Hours -** Cure not to exceed 120°F (49°C)	All Colors or Clears

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APPLICATION CONDITIONS FOR CONVENTIONAL PAINT SYSTEMS TABLE (CONTINUED FROM PAGE 7):

TOPCOAT BASE AND CURING SOLUTION COMPONENT	PREVIOUSLY APPLIED TOPCOAT	PREVIOUSLY APPLIED TOPCOAT THINNER	MAX CURE LIMIT ABOVE 90°F (32°C) OF PREVIOUSLY APPLIED TOPCOAT	SUBSEQUENTLY APPLIED TOPCOAT
Akzo Nobel: * 24F20-101/PC-226 * Eclipse ECL-G Series * ECT Series * Nobel Eclipse ECL-SG-XX Series * Eclipse ECL-F-XXX Series * 10P20-44MNF/EC-291B/TR-114 * Aerodur 3002 * Eclipse ECL-F Series **PRC Desoto:** * Desothane HS CA8000 * Desothane HS CA8020 * Desothane HS CA8010 * CA 7502A/B/C (Eclipse) **(Note 4)**	All Colors or Clears **(Note 1)**	TR-109 or TR-112 **(Note 2)**	**8 Hours-**Cure not to exceed 105°F (41°C)	All Colors or Aerodur 3002 Clearcoats **(Note 7)**

APPLICATION CONDITIONS FOR CONVENTIONAL PAINT SYSTEMS NOTES:

Note 1: Previously applied topcoat shall be overcoated within 72 hours after its application.
Note 2: The volume of TR-112 thinner used shall not exceed one part of TR-112 to four parts of TR-109.
Note 3: Applicable to Desothane HS CA 8000 series only.
Note 4: Applicable to Eclispe ECL-G series only.
Note 5: This includes topcoated surfaces where the amount of drying/curing experienced by the topcoat and/or the curing temperature is unknown.
Note 6: Application of **Sur-Prep® AP-1** over CA 8000 Clear may result in poor adhesion of the subsequent topcoat (Color or Clear).
Note 7: Application of **Sur-Prep® AP-1** between Eclipse (Color or Clear) topcoat and subsequently applied Eclipse Clear topcoat may result in hazing appearance issues. No appearance defects, such as hazing, occur when Aerodur 3002 clearcoat is applied over **Sur-Prep® AP-1**.
Note 8: Once applied, the surface coated with **Sur-Prep® AP-1** shall not be touched or disturbed prior to application of any subsequent coating.

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APPLICATION CONDITIONS FOR BASECOAT/ CLEARCOAT SYSTEMS:

1.) For basecoat/clearcoat systems, apply the basecoat according to manufacturer's instructions.
2.) After the basecoat passes inspection and is ready for the clearcoat application, apply **Sur-Prep® AP-1** over the basecoat following the **Sur-Prep® AP-1** application steps for aerosol and bulk applications.
3.) Allow the **Sur-Prep® AP-1** film to dry for at least 30 minutes and then mix and apply the clearcoat.
4.) Allow Aerodur 3001 to dry for a minimum of 2 hours before applying **Sur-Prep® AP-1** to it.
5.) Allow Aerodur 3001 Special Effects basecoat to dry for a minimum of 3 hours before applying **Sur-Prep® AP-1** to it.
6.) Once applied over any of these basecoats, the surface coated with **Sur-Prep® AP-1** shall not be touched or disturbed prior to application of any subsequent coating.

Note: If the basecoat is allowed to cure beyond the manufacturer's recommended cure conditions, **Sur-Prep® AP-1** cannot be used to reactivate the basecoat. The basecoat will need to be scuff sanded and then re-applied. Moreover, **Sur-Prep® AP-1** will need to be applied after the basecoat cures. Once applied, the surface coated with **Sur-Prep® AP-1** shall not be touched or disturbed prior to application of any subsequent coating. **Sur-Prep® AP-1** does not extend the overcoat time for Aerodur 3002. Aerodur 3002 must be sanded with abrasive paper or pad before **Sur-Prep® AP-1** can be applied to it.

PHYSICAL PROPERTIES:

- **Application Relative Humidity:** 10-70% RH
- **Application Temperature:** 65°F - 90°F (18°C - 32°C)
- **Flash Point (PMCC):** 75°F (24°C) for Part A & 90°F (32°C) for Part B
- **Pot Life (In Moisture Free Container):** 24 hours
- **Shelf Life (DOM=Date of Manufacture):** 18 months from DOM in bulk kits, 12 months from DOM in aerosol
- **VOC (Part A & B Mixed):** 861 grams/liter (7.1 lbs/gal) (Rule 1118 Specialized Function Coating)

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AVAILABLE PACK SIZES:

Sur-Prep® AP-1

- Case of 12 of 11 fl oz (325 mL) Aerosols-011671

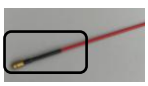
- Case of Pint (473 mL) Kits-100264

- Case of 1 Gallon (3.8 Liter) Kits-100265

Formit®

- 12 Assemblies Per Package

- **Formit® Sample Pack** with 3 each of **Formit®-18-F**, **Formit®-18-180**, **Formit®-18-360**, and **Formit®-18 STD-Fog**-100107



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