

HS Base Coat / Clear Coat

1. Introduction

ALEXSEAL HS Base Coat is a fast-drying high-solid (HS) two component polyurethane base coat with excellent hiding power, especially designed for efficient applications. Used in combination with ALEXSEAL HS Clear Coat, the material shows excellent chemical and mechanical resistance and is extremely glossy and color stable.

ALEXSEAL HS Clear Coat is a high-solid (HS) two-component polyurethane-based clear coat designed for a Base Coat / Clear Coat application over the ALEXSEAL HS Base Coat. ALEXSEAL HS Clear Coat has a high gloss wet look which provides superior distinction of image. The product's special characteristics ensure a reduction of cleaning and maintenance, while at the same time preserving the yacht's appearance and value. After curing, ALEXSEAL HS Clear Coat offers excellent gloss values, even under extreme climatic conditions. Additionally the material is highly resistant to UV rays, salt water, abrasion and fuel.

This system needs to be applied in 2 steps. Application by spray only.

Step 1: Apply 1 – 2 coats ALEXSEAL HS Base Coat (depending on the color) by spray application to a wet film thickness (WFT) of 40 - 60 microns (1.6 – 3.2 mils) per coat. This will achieve a dry film thickness (DFT) of 20 - 30 microns (0.8 – 1.2 mils) for a 1 coat application. Multiple coats may be required to achieve full hide with some colors. A flash-off time / drying period of 30 minutes at 20°C (68°F) is required. The maximum recommended film thickness during a spray application is totalling 120 microns (4.7 mils) WFT, or 75 microns (3.0 mils) DFT.

Step 2: After the ALEXSEAL HS Base Coat has dried a minimum of 2 hours at 20°C (68°F), up to a maximum of 5 days, apply 2 coats of ALEXSEAL HS Clear Coat in order to seal the Base Coat. The maximum re-coating time of the ALEXSEAL HS Base Coat should not be exceeded. In case of exceeding, sand the surface with fine grade of Scotch Brite and clean the surface with ALEXSEAL Wipe Down Solvent A9049. Apply 2 coats of ALEXSEAL HS Clear Coat to a wet film thickness (WFT) of 80 - 100 µm (3 - 4 mils). Allow 45 - 90 minutes tack up between coats. This will achieve a dry film thickness of 60 to 100 µm (2.4 - 4 mils) in 2 coats. Make sure to use freshly mixed material for the second coat.

2. Range of application

ALEXSEAL HS Base Coat / Clear Coat can be used internally or externally on areas of the yacht which are not subject to permanent water immersion.

3. Color

ALEXSEAL HS Base Coat is available in standard factory packaged colors. Refer to the color card or product overview for part numbers.

4. 1. Coverage Base Coat

Volume Solids catalyzed without reduction: 55 - 70% depending on color
 Note: Coverage rates for ALEXSEAL HS Base Coat are figured for base and converter. Activator is added as percent of total quantity of base & converter.

	m ² / liter	m ² / gal	sq. ft. / gal	@ DFT in µm (mils)
Theoretical	11	42	462	50 (2)
Practical				
Conventional Air Spray Equipment	5.5	20.8	224	50 (2)
HVLP Air Spray Equipment	6.8	26	280	50 (2)

4. 2. Coverage Clear Coat

Volume Solids catalyzed without reduction: 50 %
 Note: Coverage rates for ALEXSEAL HS Clear Coat are figured for base and converter. Reducer is added as percent of total quantity of base and converter.

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	m ² / liter	m ² / gal	sq. ft. / gal	@ DFT in μm (mils)
Theoretical	15	57	627	35 (1.4)
Practical				
Conventional Air Spray Equipment	7.4	28.2	304	35 (1.4)
HVLP Air Spray Equipment	9.3	35.4	381	35 (1.4)

5. Substrate pre-treatment The substrate must be clean, dry and free from dust, grease, oil, and other contamination. To achieve optimum performance and adhesion ALEXSEAL Finish Primer 442 must be used. Final sanding of ALEXSEAL Finish Primer 442 should be carried out with 280, 320 or 400 grit sand paper to a smooth finish.

It is recommended that the ALEXSEAL HS Base Coat should be applied over the sanded primer within 4 days, 2 days if outside to ensure adhesion.

6. Trade names Base Coat	Base Material	Hxxxx	ALEXSEAL HS Base Coat
	Converter Spray	C5047	ALEXSEAL HS Base Coat Converter
	Activator Medium	R5541	ALEXSEAL HS Base Activator Medium
	Activator Slow	R5521	ALEXSEAL HS Base Activator Slow
Clear Coat	Base Material	H0150	ALEXSEAL HS Clear Coat
	Converter	C5067	ALEXSEAL HS Clear Coat Converter
	Activator Medium	R5561	ALEXSEAL HS Clear Activator Medium
	Activator Slow	R5531	ALEXSEAL HS Clear Activator Slow
7. Mixing ratio Base Coat	3 part by volume	Hxxxx	ALEXSEAL HS Base Coat
	1 part by volume	C5047	ALEXSEAL HS Base Coat Converter
	1 part by volume	R....	ALEXSEAL HS Base Activator (choose from list above)
	Example: 3:1:1		

The amount of ALEXSEAL HS Activator (activated reducer) is fixed and cannot be changed.

Mixed material must be filtered with 90μm before application.

Clear Coat	1 part by volume	H0150	ALEXSEAL HS Clear Coat
	1 part by volume	C5067	ALEXSEAL HS Clear Coat Converter
	1 part by volume	R....	ALEXSEAL HS Clear Activator (choose from list above)
	Example: 1:1:1		

The amount of ALEXSEAL HS Clear Activator (activated reducer) is fixed and cannot be changed.

Mixed material must be filtered with 90μm before application.

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8. Application

Viscosity Base Coat	Zahn #2: ≈ 15 - 19 sec, DIN 4 cup 4mm: ≈ 13 - 15 sec, ISO 3: ≈76 sec
Viscosity Clear Coat	Zahn #2: ≈ 19 - 21 sec, DIN 4 cup 4mm: ≈ 15 - 17 sec, ISO 3: ≈45 sec
Nozzle Size Gravity Gun	1.0 to 1.3 mm (0.040 to 0.051 inch) - Conventional & HVLP
Nozzle Size Siphon Cup	1.0 to 1.3 mm (0.040 to 0.051 inch) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	0.8 to 1.0 mm (0.032 to 0.040 inch) - Conventional & HVLP
Atomizing Pressure	2.5 to 4.0 bar (40 to 60 PSI) - Conventional & HVLP
Pot Pressure	0.5 to 1.2 bar (7 to 16 PSI) - Conventional & HVLP

Application by Spraying:

ALEXSEAL HS Base Coat is intended to be part of a base coat / clear coat finish. This system needs to be applied in 2 steps.

Step 1: Apply 1 – 2 coats ALEXSEAL HS Base Coat (depending on the color) by spray application to a wet film thickness (WFT) of 40 - 60 microns (1.6 – 3.2 mils) per coat. This will achieve a dry film thickness (DFT) of 20 - 30 microns (0.8 – 1.2 mils) for a 1 coat application.

Multiple coats may be required to achieve full hide with some colors. A flash-off time / drying period of 30 minutes at 20°C (68°F) is required. The maximum recommended film thickness during a spray application is totalling 120 microns (4.7 mils) WFT, or 75 microns (3.0 mils) DFT.

Step 2: After the ALEXSEAL HS Base Coat has dried a minimum of 2 hours at 20°C (68°F), up to a maximum of 5 days, apply 2 coats of ALEXSEAL HS Clear Coat in order to seal the Base Coat. The maximum re-coating time of the ALEXSEAL HS Base Coat should not be exceeded. In case of exceeding, sand the surface with fine grade of Scotch Brite and clean the surface with ALEXSEAL Wipe Down Solvent A9049.

Apply 2 coats of ALEXSEAL HS Clear Coat to a wet film thickness (WFT) of 80 - 100 µm (3 - 4 mils). Allow 45 - 90 minutes tack up between coats. This will achieve a dry film thickness of 60 to 100 µm (2.4 - 4 mils) in 2 coats. Make sure to use freshly mixed material for the second coat.

Multi Color Scheme:

ALEXSEAL HS Base Coat is the best materials for realizing multi color schemes on a yacht because the base coat is fast drying, tape dry already after 4 hours. For masking the different areas use high quality tape, e.g. 3M Scotch Performance Coloured PVC Film Tape 6893 19x66 mm. After applying the different colors, overcoat the whole surface with the Clear Coat.

HS Base Coat / Clear Coat

9.1. Base Coat Pot life and Drying Optimal application environment range - min. 15°C (60°F) 40% RH, up to max. 30°C (85°F) 80% RH

Temperature for minimum drying time	15°C (60°F)	20°C (68°F)	25°C (77°F)	30°C (85°F)	Max Dry Time
Pot Life - approx.	3 hrs	2.5 hrs	2 hrs	1,5 hrs	N/A
Dust Free	90 min	60 min	45 min	30 min	N/A
Tape Dry	5 hrs	4 hrs	3 hrs	2 hrs	N/A
Fully Cured	10 days	7 days	7 days	7 days	N/A
Recoat after tack up with additional coats of ALEXSEAL® HS Base Coat	45 min	30 min	30 min	15 min	5 days
Overcoat with ALEXSEAL® HS Clear Coat	4 hrs	3 hrs	2 hrs	2 hrs	5 days

Note: The above chart reflects approximate minimum and maximum time. Surface temperature, air flow, direct or non-direct sunlight, quantity and/or choice of reducer, and film thickness will affect actual tack up, recoat, overcoat, and drying times during application. During the drying phase the minimum temperature is 15°C (60°F). Ideal temperature: 25°C (77°F). The minimum application condition should be 3°C (5.4°F) above dew point.

9.2. Clear Pot life and Drying Optimal application environment range - min. 15°C (60°F) 40% RH, up to max. 30°C (85°F) 80% RH

Temperature for minimum recoat time	15°C (60°F)	20°C (68°F)	25°C (77°F)	30°C (85°F)	Max Dry Time
Pot Life - approx.	3hrs	2.5 hrs	2 hrs	1.5 hrs	N/A
Dust Free	3 hrs	3 hrs	2 hrs	2 hrs	N/A
Tape Dry	36 hrs	30 hrs	24 hrs	16 hrs	N/A
Sandable	36 hrs	30 hrs	24 hrs	16 hrs	N/A
Fully Cured	10 days	7 days	7 days	7 days	N/A
Recoat after tack up with additional coats of ALEXSEAL® HS Clear Coat	90 min	60 min	60 min	45 min	5 days

Note: The above chart reflects approximate minimum and maximum time. Surface temperature, air flow, direct or non-direct sunlight, quantity and/or choice of reducer, and film thickness will affect actual tack up, recoat, overcoat, and drying times during application. During the drying phase the minimum temperature is 15°C (60°F). Ideal temperature: 25°C (77°F). The minimum application condition should be 3°C (5.4°F) above dew point.

10. Packaging	Hxxxx	ALEXSEAL HS Base Coat (Base Color)	0,75 Gal
	C5047	ALEXSEAL HS Base Coat Converter	1 QT
	R....	ALEXSEAL HS Base Activator	1 QT
H0150	ALEXSEAL HS Clear Coat	1 Gal	
C5067	ALEXSEAL HS Clear Coat Converter	1 Gal	
R....	ALEXSEAL HS Clear Activator	1 Gal	

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