

1. Introduction

ALEXSEAL M series Metallic Base Coat/ Clear Coat system is a 2 stage system which has been designed specifically to make it possible to apply the metallic basecoat evenly on large surfaces. Then ALEXSEAL Premium Topcoat Clear is applied to seal, protect, and to withstand the harsh marine environment.

ALEXSEAL Premium Topcoat 501 Clear is a two component, polyurethane-based coating, designed for a Clear Coat application over the ALEXSEAL Metallic Base Coat. ALEXSEAL Premium Topcoat 501 Clear has a high gloss wet look which provides superior distinction of image. This product has been specifically developed for the yacht industry. Additionally this product is highly resistant to UV rays, salt water, abrasion and fuel.

This system needs to be applied in 3 steps. Application by spray only.

Step 1: Apply ALEXSEAL Metallic Base Coat by spray application using a cross coat application technique. A minimum of two medium cross coats to achieve full hide or coverage is normally what is required.

Step 2: After the Base Coat has dried a minimum of 3 hours at 30°C (85°F), longer times for lower temperatures, see chart below, apply 3 coats of ALEXSEAL Premium Topcoat 501 Clear in order to seal the Base Coat. The overcoating times are affected by temperature and humidity: see chart below for detailed information.
Note: Remove tape which has been overcoated with Clear Coat as soon as possible, for example after 2 hours.

Step 3: To achieve a higher level of gloss and a more durable finish, a second application of 2 coats (50-75µm DFT) of ALEXSEAL Premium Topcoat 501 Clear is recommended. After the first layer of clear has dried for a minimum of 4 days, carefully sand with 320 - 400 grit dry sand paper or 500 – 600 grit wet sand paper. Graphics may be added between Step 2 and 3.
Note: It is important not to break through the clear to the metallic when sanding, this will affect or change the color of the metallic.

2. Range of application

ALEXSEAL M series Metallic 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 Metallic Base Coat is available in standard factory packaged colors and, upon request, in custom colors. Refer to the color card or price list for part numbers.

4. 1. Coverage Metallic

Volume Solids without reduction: 25 - 40% (depending on color)

Note: Coverage rates for ALEXSEAL Metallic Base Coat are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

Coverage for the Metallic Base Coat	m ² / liter	m ² / gal	sq. ft. / gal	@ DFT in µm (mils)
Theoretical	10.5	40	428	25 (1)
Practical				
Conventional Air Spray Equipment for Parts and Superstructure/multiple shoots	2.45	9.29	100	25 (1)
Conventional Air Spray Equipment Flat Panel or Hull Side shoot	4.41	16.72	180	25 (1)

Metallic Base Coat / Clear Coat

Technical Data Sheet:
Mseries / T0125

4. 2. Coverage Clear

Note: Coverage rates for ALEXSEAL Premium Topcoat Clear are figured for base and converter for two applications of clear (first application in 3 coats, second application in 2 coats). Reducer is added as percent of total quantity of base and converter.

Coverage for ALEXSEAL Topcoat 501 Clear	m ² / liter	m ² / gal	sq. ft. / gal	@ DFT in μm (mils)
Theoretical	6	22.7	244	75 (3)
Practical				
Conventional Air Spray Equipment	2.4	9.29	100	75 (3)
HVLP Air Spray Equipment	3	11.6	125	75 (3)

5. Substrate pre-treatment

The substrate must be clean, dry and free from dust, grease, oil and other contaminations. To achieve optimum performance and adhesion ALEXSEAL Finish Primer 442 must be used. Final sanding of ALEXSEAL Finish Primer 442 should be smooth sanded with 280 - 320 grit dry sand paper or 500 – 600 wet sand paper. For refit jobs contact your sales rep. Integrity of the old coating may affect the decision to use ALEXSEAL Finish Primer 442.

6. Trade names Metallic:

Base Material	M....	ALEXSEAL Metallic Base Coat (Base Color)
Converter	C5051	ALEXSEAL Topcoat Converter Spray
Reducer Fast	R5070	ALEXSEAL Topcoat Reducer Fast
Reducer Medium	R5050	ALEXSEAL Topcoat Reducer Medium

Clear:

Base Material	T0125	ALEXSEAL Premium Topcoat 501 Clear Gloss
Converter Spray	C5051	ALEXSEAL Topcoat Converter Spray
Reducer Fast	R5070	ALEXSEAL Topcoat Reducer Fast
Reducer Medium	R5050	ALEXSEAL Topcoat Reducer Medium
Reducer Slow	R5030	ALEXSEAL Topcoat Reducer Slow
Accelerator	A5035	ALEXSEAL Topcoat 501 Accelerator

7. Mixing ratio Metallic:

5 parts by volume	M....	ALEXSEAL Metallic Base Coat (Base Color)
1 part by volume	C5051	ALEXSEAL Topcoat Converter Spray
3 parts or 50 % by volume		ALEXSEAL Topcoat Reducer (see above)
Example: 5 : 1 : 3 = 50% reduction		

Clear:

1 part by volume	T0125	ALEXSEAL Premium Topcoat 501 Clear
1 part by volume	C5051	ALEXSEAL Premium Topcoat 501 Converter
15 - 25 % by volume	R....	ALEXSEAL Topcoat Reducer (see above)
Example: 1 : 1 : 1/2 = 25 % reduction		

The amount of reducer required may vary depending on the application conditions. Sand between the clear applications with 320 - 400 grit dry sand paper or 500 - 600 grit wet sand paper is recommended.

Second Clear Application: Recommended to achieve higher DOI and gloss: Same mix as first application of clear.

Accelerator for clear only. Do not use accelerator in the metallic base coat.

Accelerator may be used only in the T0125 Clear: A5035 ALEXSEAL Topcoat 501 Accelerator is used to reduce the drying time of ALEXSEAL Premium Topcoat 501 Clear. Per each mixed (catalyzed and reduced) 2 quarts (2 liters) of ALEXSEAL Premium Topcoat 501, a maximum of 1 cap or 10 ml (1/3 ounce) of A5035 ALEXSEAL Topcoat 501 Accelerator may be added. Additional quantities of accelerator reduce pot life, affect adhesion and gloss retention, and is not recommended.

Professional Use Only

Page 2 of 4

The information contained in this data sheet is based on our level of research and development. Revisal by the user with regard to the intended aim is necessary due to the diverse processing and application possibilities. revision 04/2018

Metallic Base Coat / Clear Coat

Technical Data Sheet:
Mseries / T0125

8. Application

Viscosity	Zahn #2: ≈ 15 - 17 sec, DIN 4 cup 4mm: ≈ 14 - 18 sec
Nozzle Size Gravity Gun	1.2 to 1.4 mm (0.047 to 0.055 inches)
Fluid Nozzle Size Pressure Pot	1.0 to 1.2 mm (0.039 to 0.047 inches)
Atomizing Pressure	3.0 to 5.0 bar (42 to 70 PSI) Note: 4 bar (50 PSI) is optimal
Pot Pressure	0.7 to 1.2 bar (10 to 15 PSI)

Application by Spraying

Step 1: Apply 2 cross coats ALEXSEAL Metallic Base Coat to a wet film thickness (WFT) of 25 - 50 microns (1 - 2 mils). Allow 30 minutes up to 4 hours tack up between cross coats. This will achieve a dry film thickness (DFT) of 20 - 40 microns (1 - 2 mils) for a 2 cross coat application. Maximum recommended film thickness during a spray application is 3 cross coats totalling 150 microns (6 mils) WFT, or 50 microns (2 mils) DFT.

Step 2: After the Metallic Base Coat has dried a minimum of 3 hours at 30°C (85°F), longer times for lower temperatures, see chart below, up to a maximum of 12 hours at 25°C (77°F), apply 2-3 coats (50-75µm DFT) of ALEXSEAL Premium Topcoat 501 Clear in order to seal the Metallic Base Coat. The overcoating times are effected by temperature and humidity: see chart below for detailed information. Note: Remove tape which has been overcoated with Clear Coat as soon as possible, for example after 2 hours.

Step 3: To achieve a higher level of gloss and a more durable finish, apply a second application of 2 coats (50-75µm DFT) of ALEXSEAL Premium Topcoat 501 Clear may be needed. Careful sanding of the first Clear Coat with 320 - 400 grit dry sand paper or 500 - 600 grit wet sand paper is possible after a period of at least 24 hours (4 days is optimal), depending on temperature and humidity, in order to avoid damaging the metallic surface. Graphics may be added between Step 2 and 3. Note: it is important not to break through clear when sanding, this can effect or change the color of the metallic.

9. 1. Metallic 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 Time
Pot Life - approx. Metallic Base Coat	12 hrs	10 hrs	8 hrs	6 hrs	N/A
Recoat of Metallic Base Coat over Metallic Base Coat after tack up.	45 min	30 min	30 min	30 min	4 hrs
Overcoat with Alexseal Premium Topcoat 501 Clear over the Metallic Base Coat					
@ 20% relative humidity	6 hrs Max 24 hrs	4 hrs max 24 hrs	3 hrs max 12 hrs	3 hrs max 6 hrs	N/A
@ 50% relative humidity	6 hrs Max 24 hrs	4 hrs max 12 hrs	3 hrs max 12 hrs	3 hrs max 6 hrs	N/A
@ 80% relative humidity	6 hrs Max 24 hrs	4 hrs max 12 hrs	3 hrs max 6 hrs	3 hrs max 6 hrs	N/A
Note: For tropical climate (> 30°C (85°F) or 25°C (77°F) and RH > 50%) max. overcoating time of the metallic base coat will be reduced to 6 hours.					
Note: The above chart reflects approximate minimum and maximum time. Surface temperature, air flow, direct or non-direct sunlight, quantity of reducer, and film thickness will affect actual 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.					
DO NOT use accelerator in the Base Coat System. Alexseal A5035 Accelerator may be used in the T0125 Clear.					

Professional Use Only

Page 3 of 4

The information contained in this data sheet is based on our level of research and development. Revisal by the user with regard to the intended aim is necessary due to the diverse processing and application possibilities. revision 04/2018

Metallic Base Coat / Clear Coat

Technical Data Sheet:
Mseries / T0125

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 Clear Coat- approx.	6 hrs	6 hrs	4 hrs	4 hrs	N/A
Pot Life Clear Coat - with A5035 ALEXSEAL Topcoat 501 Accelerator	3 hrs	3 hrs	2 hrs	2 hrs	4 hrs
Dust Free Clear Coat	90 min	60 min	45 min	30 min	N/A
Tape Dry Clear Coat – w/o accelerator	36 hrs	30 hrs	24 hrs	18 hrs	N/A
Tape Dry Clear Coat - with A5035 ALEXSEAL Topcoat 501 Accelerator	30 hrs	24 hrs	18 hrs	12 hrs	N/A
Fully Cured Clear Coat- without accelerator	21 days	18 days	14 days	10 days	N/A
Recoat after tack up with additional coats of ALEXSEAL Premium Topcoat 501 Clear	90 min	60 min	45 min	30 min	16 hrs

Note: The above chart reflects approximate minimum and maximum time. Surface temperature, air flow, direct or non-direct sunlight, quantity of reducer, and film thickness will effect actual times during application. During the drying phase the minimum temperature is 15°C (60°F). Ideal temperature: 25°C (77°F).

10. Packaging

ALEXSEAL M series Metallic Base Coat (Base Color)	1 Qt & 1 Gal
C5051 ALEXSEAL Topcoat Converter Spray	1 QT & 1 Gal
R.... ALEXSEAL Topcoat Reducers Fast or Medium	1 QT & 1 Gal
T0125 ALEXSEAL Premium Topcoat 501 Clear Gloss	1 QT & 1 Gal
C5051 ALEXSEAL Topcoat Converter Spray	1 QT & 1 Gal
R.... ALEXSEAL Topcoat Reducers	1 QT & 1 Gal
A5035 ALEXSEAL Topcoat 501 Accelerator	4 Ounces

Professional Use Only

Page 4 of 4

The information contained in this data sheet is based on our level of research and development. Revisal by the user with regard to the intended aim is necessary due to the diverse processing and application possibilities. revision 04/2018