

Metallic Base Coat

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. ALEXSEAL Metallic Base Coat is a two-component base coat that guarantees good adhesion and prevents colour differences and cloudiness. In the second step, an aliphatic two-component polyester-polyurethane clear coat is applied. The Base Coat needs to be overcoated with a Clear Coat!

2. Range of application

ALEXSEAL M series Metallic Base Coat / Clear Coat system 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. Coverage

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.

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

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 P280 - P320 grit dry sand paper or P500 – P600 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 & Packaging

M...	ALEXSEAL Metallic Base Coat (Base Color)	1 Ot & 1 Gal
C5051	ALEXSEAL Topcoat Converter Spray	1 Ot & 1 Gal
R5050	ALEXSEAL Topcoat Reducer Medium	1 Ot & 1 Gal

7. Mixing ratio

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

Do not use accelerator in the metallic base coat.

8. Application

Viscosity	Zahn #2 Signature: ≈ 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. Allow 30 minutes up to 4 hours tack up between cross coats. This will achieve a dry film thickness (DFT) of 20 - 40 microns for a 2 cross coat application. Maximum

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recommended film thickness during a spray application is 3 cross coats totalling 150 microns WFT, or 50 microns DFT.

Some colors may require an additional mistcoat/dropcoat to achieve a uniform finish. It can be applied wet in wet or once the previous coat has dried. The mistcoat/dropcoat will avoid shade variations and clouding effect.

Step 2: After the Metallic Base Coat has dried a minimum of 3 hours at 30°C, longer times for lower temperatures, see chart below, up to a maximum of 12 hours at 25°C, apply ALEXSEAL Clear Coat in order to seal the Metallic Base Coat. For further information please see TDS of the respective ALEXSEAL Topcoat.

Some very coarse metallics may need another coat of clear. 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, another application of ALEXSEAL Clear Coat 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 affect or change the color of the metallic base coat!

9. Pot life and Drying Optimal application environment range - min. 15°C 40% RH, up to max. 30°C 80% RH

Temperature for minimum drying time	15°C	20°C	25°C	30°C	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 Clear Coat 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.

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