

# ALEXSEAL®

Yacht Coatings

## Professional Application Guide

version 1.0



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MANKIEWICZ 

# Introduction

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ALEXSEAL® Yacht Coatings offers a complete system of premium paint products comprised of the highest quality pigments, solvents, aliphatic urethane resins, ultraviolet resistors and agents to create the most advanced marine topcoats available on the market today. Backed by our professional technical and sales support programs, an ALEXSEAL® yacht represents the industry's best combination of appearance, durability and reparability.

This application guide is intended to provide you with safety, preparation, application, finishing, and maintenance information in order to provide you with reliable and professional results.

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**ALEXSEAL®**  
Yacht Coatings



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Material Safety Data Sheets (MSDS) are available on [www.alexseal.com](http://www.alexseal.com)

### United States

In the event of a serious mishap, always dial 911 or contact the emergency services closest to you. For Health and Safety Issues such as disposal, workplace safety or environmental issues, contact:

#### CHEMTREC

Customer Service representatives are available Monday through Friday 8:30am to 5:00pm Eastern Time Zone, USA & Canada.

Phone: 1-800-262-8200 (within the USA)  
or +1 703-741-5500 (from anywhere in the world).

Email: [chemtrec@chemtrec.com](mailto:chemtrec@chemtrec.com)

### Europe

In the event of a serious mishap, always dial 112, 999 or contact the emergency services closest to you. For Health and Safety Issues such as disposal, workplace safety or environmental issues, contact:

#### AVG Hamburg

Phone: +49 40 73351-0

Email: [info@avg-hamburg.de](mailto:info@avg-hamburg.de)

## Additional Resources

### Distributors

Please visit [www.alexseal.com](http://www.alexseal.com) for the most up-to-date distributor contact information.

### Product Literature

ALEXSEAL® product information is available in a variety of forms, including the following print materials. Please contact your sales and support representative or visit the [ALEXSEAL® web site](#) to request any of these documents.

- ALEXSEAL® Premium Topcoat Color Card (T Series)
- ALEXSEAL® Metallic Color Card (M Series)
- ALEXSEAL® Product Overview
- ALEXSEAL® Brochure



### Online

Our website [www.alexseal.com](http://www.alexseal.com) should be considered the most up-to-date resource for ALEXSEAL® information, including product line-up, Technical Data Sheets (TDS), Material Safety Data Sheets (MSDS), distributor & support information.

You can also connect with us on social networks at [twitter.com/alexsealpaint](https://twitter.com/alexsealpaint) & [facebook.com/alexsealvachtcoatings](https://facebook.com/alexsealvachtcoatings)

## Paint Process Overview

Whether fiberglass, wood or metal – the barrier that ultimately stands between a boat's substrate and the destructive marine elements – is the paint. The entire ALEXSEAL® system was designed specifically for the harsh marine environment. Proper preparation, application and maintenance are essential for maintaining the appearance and integrity of this finish. Haphazard surface preparation, priming, fairing or finishing can result in downtime and additional costs. Correctly applied quality finishes create a level of economy with improved protection from the elements, UV resistance, and easier exterior maintenance.

All surfaces must be cleaned and sanded, then faired as needed to fill imperfections, and then sanded, primed and re-sanded before the final application of the finish coating. Proper application of Alexeal® systems requires attention to detail, and is not easy, but the end results are incredible.

As you read and refer to this guide, keep these basic ideas in mind:

### 1. There is never any substitute for safety.



#### Caution:

The solvents, primers and paints used in this process are volatile and pose serious physical hazards if not handled properly. Avoid contact with eyes, skin or clothing. Use solvent resistant safety eye wear with splash guards. Solvent impermeable gloves, clothing and boots should be worn to prevent skin contact. When applying an ALEXSEAL® Topcoat or any other isocyanate-containing product, a respirator that is approved for use with such products must be used. A positive pressure air-supplied respirator (TC19C NIOSH/MSHA approved) is recommended.

2. Surface preparation is the foundation of a strong finish.
3. Take your time with your work.
4. Hasty, careless sanding, priming or fairing, will only create more work for you and will also affect the final result.
5. Cleanliness of equipment, work area and the surface will result in precise applications that will always reflect well on you.
6. Knowledge is the scarcest of all resources. Use this guide often and do not hesitate to contact ALEXSEAL® support to assist you.

# Equipment

## Application & Safety Equipment

When selecting equipment to use for preparation, priming or finishing, be sure to consider quality first. All safety equipment, compressor systems and spraying apparatus should be professional grade and in proper working order. Cutting corners on equipment to save time or money will likely result in a substandard finish that could result in additional expenses and man-hours.



### Caution:

Adequate ventilation is important for the safety of personnel as well as the integrity of the application. Maintain continuous flow of fresh air in the workspace. Do not breathe vapors, spray mists or sanding dusts. Wear an appropriate, properly fitted, supplied-air respirator during and after application – unless air monitoring demonstrates vapor and particulate levels are below applicable limits. Follow the respirator manufacturer's directions for proper, safe respirator use. Be sure all respirator equipment and protective gear is properly maintained and inspected prior to use. Engineering or administrative controls should be implemented to reduce exposure. Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV's (Threshold Limit Values).

## Compressed Air & Compressors

Air sources in the painting environment need regular attention to avoid propelling and circulating contaminants. A poorly maintained compressor and peripheral equipment can contaminate the painting environment. In addition, improper use of compressed air can propel particles into a surface at an accelerated velocity – creating severe marks or deformities that could require significant effort to repair. Therefore, filtered, clean, oil free, dry air is essential for all spray equipment and air tools, both when applying paint and blowing off surfaces prior to priming or painting. All supply lines should have properly maintained oil and water separators. There should be no less than 50 ft. (15 meters) between the compressor and the separators to allow the water to separate from the heated air. Based on the climate and environment of the painting facility, additional separators may be required. Air dryers are highly recommended to provide clean, dry air.

Prior to each use, all hoses, pots and spray tips should be thoroughly cleaned by circulating clean solvent through the system.



### Note:

New equipment may arrive with factory lubricants or residue from the manufacturing process and should also be cleaned with this same process.

## Air Flow in the Painting Environment

Good airflow in the painting environment is recommended to allow the solvents to evaporate away from the paint film as well as to remove overspray from the surface. All coatings will dry quicker and more thoroughly when applied in an environment with positive air flow of at least 100 cubic feet (2.8 m<sup>3</sup>/m) per minute.

# Equipment

## Tack Rags

Tack rags are used just before painting to remove the fine debris such as airborne dust and dirt from the surface that has been prepared for painting.

Use tack rags before the final topcoat applications. Tack rags are not required when fairing materials or surfacers are utilized. When tacking a primer or topcoat surface, use only rags that are pre treated with the proper amount of chemicals to pick up dust without leaving any residue on the surface. Some brands of tack rags may leave a residue that causes deformities in the topcoat.



### Note:

DO NOT use excessive hand pressure when rubbing with tack rags. Light, gentle dusting is all that is required since the rags are pre treated with a compound that attracts contaminants.

## Taping and Masking

### Masking Tape

Masking tape is used to prevent paint from coating an area – as well as for attaching other masking materials (paper, plastic, cloth). It is important to take note of the quality and composition of both the adhesive and the top material of the masking tape. The tape selected should be compatible with both urethane and epoxy coatings. Incompatible (usually cheap) masking tape will have adverse effects on the painting process and should be avoided. These effects may include leakage of paint beneath the tape, poor resistance to solvents or moisture, and adhesive residue left on the surface after removal. Taperlines left on a surface are difficult to remove and create additional work and cost in the painting process. When masking to create stripes, use thin tape intended for a striping application such as 3M Fine Line® #218. An effective technique to prevent paint from leaking beneath the tape line or “creeping” is to create a good seal between the tape and the surface by rubbing the edge of the tape with a straight edge, fine sandpaper or a scrubbing pad.

### Foam Tape

When painting sections of a boat or performing repairs, it is often desired to have a “soft” tape line. This is where the paint film gradually decreases into existing paint instead of having a raised edge where the new paint meets the existing paint. Manufacturers such as 3M produce a soft edge foam masking tape (DART Tape) that is helpful to create soft lines. When foam tape is not available use a wide 2” (5 cm) tape and roll it back over itself. By rolling the tape back, you create a softer, tapered line. When using these products and techniques, it is difficult to get straight lines so only use these where a soft line is desired.

### Masking Paper

Masking papers also come in numerous grades. Some facilities opt to use plastic sheeting in lieu of, or in addition to, paper masking materials. Solvents in urethane and epoxy coatings may negatively react with low-grade paper, or papers that have plastic or chemical content that is reactive with polyurethane or epoxies. Therefore, it is critical to select masking paper with high resistance to solvent penetration. Masking material such as 3M Scotchblok® Masking Paper is recommended. DO NOT use newspaper for masking.

# Equipment

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## Important:

DO NOT use lightweight plastic masking materials that may cling or attach themselves to the surface. This may leave permanent marks or deformities on the paint. Plastic sheeting left on a surface longer than 48 hours may cause water condensation under the sheeting that will result in blistering, bubbling or other defects in the paint finish.

## Brushes & Rollers

Use brushes and rollers that are specified for use with urethanes and epoxies. Household-quality equipment will “melt” because of their lack of solvent resistance.

## Brushes

Use paint brushes with natural bristles that are solvent resistant and are attached to the ferrule with epoxy. Using brushes of a higher quality will yield more consistent results. Manufacturers such as Corona or Red Tree make brushes that are known to perform well with ALEXSEAL® products.

High quality brushes are recommended for all ALEXSEAL® products including applying interior water based finish paint. When applying ALEXSEAL® Premium Topcoat 501, it is sometimes helpful to work with two or more brushes. Allow the extra brush(es) to soak in ALEXSEAL® Brushing Reducer (R5015) while working with another. Switch brushes periodically to keep material from building up in the heel of the brush. Pay close attention to the bristles to assure there are no particles or debris accumulating that could be transferred to the coating.

Always remember to remove excess reducer thoroughly from the brush that was soaking before using again. Spin brushes with a brush spinner for best results.



## Important:

DO NOT soak brushes in conditioners, oils, turpentine or any cleaner that may contaminate the applied product. DO NOT use foam brushes to apply ALEXSEAL® products, as they will likely disintegrate and melt into the coatings. Using foam brushes to tip off a rolled surface is often an effective practice. However, it is important to note that the foam brushes will likely swell over time and will need to be thrown away frequently to avoid contaminating the application.

## Rollers for ALEXSEAL® Primers and Topcoats

Always use a solvent resistant roller that will not disintegrate or melt when applying solvent-based primers or topcoats. Rollers that are used with a “cage” handle should have a phenolic core, which is solvent resistant and will not disintegrate. Short nap cage rollers are preferred that have a nap which does not exceed 3/16” (4.5 mm)

High density solvent resistant foam rollers are recommended because they do not apply too much material at one time, and the ends of the roller are tapered – which reduces overlap marks, and results in a more even finish.

After using a roller, a brush should be used for tipping off the paint to remove any bubbles or stipples left by the roller application. Use fresh lacquer thinner for cleaning equipment. Sometimes the cost in terms of time and effort to clean brushes is more expensive than disposing of brushes after use.

# Equipment

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## Spray Guns

ALEXSEAL® products can be delivered by a variety of professional quality spray guns. As with all equipment, the spray gun, hoses, tips and paint reservoirs should be kept clean and rinsed with solvent prior to each use. Be sure to test spray volume and pattern on a sample surface prior to each application.



## Spray Equipment Tips:

Use professional grade, well maintained equipment. ALEXSEAL® products are designed to be applied in a precise fashion. Low grade or poorly maintained equipment will jeopardize this quality. Spray guns, tips, and reservoirs should all be kept clean with attention to quality. Air hoses must be the correct type and capacity to assure consistent results. Prior to the application of any ALEXSEAL® product, all equipment (e.g. pressure pots, hoses, tips, etc.) should be flushed with an ALEXSEAL® Topcoat Reducer or clean, non-recycled virgin alcohol, lacquer thinner, MEK, or acetone. This includes new equipment, which may have an oil or residue remaining from the machining process that must be removed. Air hoses should only be flushed with high quality denatured alcohol, because the rubber inside an air hose is not solvent resistant like a fluid hose.

## Standardize Your Equipment

Use equipment that is the same brand, type and capacity to achieve uniform results on jobs that have multiple application points. This should include having the same air cap, tip and nozzle for each sprayer, as recommended by the spray gun manufacturer.

## Ensure Clean Gun/Hoses/Air

Replace dirty air hoses and check regularly for leaks. Check for air cleanliness by running air for 10 - 15 mins through a clean, white cotton rag and then checking for any residue. Change filters, service water and oil traps regularly. Be sure to use an adequate number of traps for long air hoses.

## Check Environmental Conditions

Temperature (both air and substrate), humidity and air flow all may need controlling to optimize your result. DO NOT attempt to apply in marginal conditions or rush an application when current conditions are apt to change mid-application. Ensuring the air is as clean as possible and free of airborne debris from surface preparation or other sources, will help ensure the highest quality application. Rinsing the floor of the paint facility is highly recommended prior to application. Be sure to follow recommendations on appropriate [“Technical Data Sheets”](#) prior to applying any ALEXSEAL® product. Refer to mixing charts, and choose the correct reducer to thin to the recommended viscosity.

## Determine The Optimum Gun Setup

Use the fan check method to get your paint atomization set right. Check the fluid flow rate and air pressure at the gun. Test on a spare panel a minimum of three times prior to application.

## Synchronize Gun Settings

Check that all sprayers have the proper fluid flow and air pressure, and that these are not modified during application. Use the same test area to compare spray results prior to continuing application.

# Equipment

## Spray a Test Area

At the start of the job and before each coat, spray a decent sized area on a separate panel and check the appearance and wet film thickness (WFT).

Use mixing and spray charts and measure quantities precisely. Record the gun settings for future reference. Work well within the pot life, because as the paint continues to induct, the rheology can change, affecting the final result. Be sure to record the date and time products are opened, and dispose of product that has exceeded acceptable shelf life. Use the ["Application Record" starting on page 138](#) of this manual. Record and save parameters such as mixing ratios, conditions and application method to refer to on future applications to assure consistent results.

## Product Spray Table

Use this table as a guide for planning and preparing for the application of ALEXSEAL® products. This table is not intended to be a substitute for information found in the ["Technical Data Sheets" starting on page 62](#).

### Protective Primer 161

Viscosity	Zahn #2: ≈ 80 sec, DIN 4 cup 4mm: ≈ 70 sec
Nozzle Size Gravity Gun	1.8 - 2.5 mm (0.071 - 0.098) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.60) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.4 - 1.6 mm (0.055 - 0.063) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 22 PSI) - Conventional & HVLP
Airless Equipment	Tip 0.35mm / 60° - 0.43mm / 60° (0.014 / 60° - 0.017 / 60°) Inlet Pressure 2 - 3 bar (29 - 44 PSI)

### CF Metal Primer 156

Viscosity	Zahn #2: ≈ 15 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.040 - 0.055) - Conventional & HVLP
Nozzle Size Siphon Cup	1.4 - 1.6 mm (0.061 - 0.070) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.2 mm (0.040 - 0.046) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 15 PSI) - Conventional & HVLP

### Cor Spec Primer 135

Viscosity	Zahn #2: ≈ 15 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.039 - 0.055) - Conventional & HVLP
Fluid Nozzle Size Siphon Cup	1.4 - 1.6mm (0.061 - 0.070) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	0.8 - 1.2 mm (0.032 - 0.046) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI)
Pot Pressure	0.7 - 1.5 bar (10 - 15 PSI) - Conventional & HVLP

# Equipment

## Spray Fair 328

Fluid Nozzle Size Pressure Pot	2.2 - 2.8 mm (0.08 - 0.110 inch) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (44 - 73 PSI) - Conventional & HVLP
Pot Pressure	1 - 1.5 bar (15 - 22 PSI) - Conventional & HVLP
Airless Equipment	Tip 0.50mm / 60° - 0.60mm / 60° (0.020 / 60° - 0.024 / 60°)
Inlet Pressure	3 - 5 bar (44 - 70 PSI)

## Super Build 302

Viscosity	Zahn #2: ≈ 24 sec, DIN 4 cup 4mm: ≈ 20 sec
Nozzle Size Gravity Gun	2.0 mm (0.079) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.2 - 1.6 mm (0.046 - 0.060) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 22 PSI) - Conventional & HVLP
Airless Equipment	Tip 0.43 mm / 60° (0.017 / 60°) Inlet Pressure 3 - 5 bar (44 - 70 PSI)

## Finish Primer 442

Viscosity	Zahn #2: ≈ 25 sec, DIN 4 cup 4mm: ≈ 21 sec
Nozzle Size Gravity Gun	1.4 - 1.8 mm (0.055 - 0.071) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.2 - 1.6 mm (0.046 - 0.060) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 22 PSI) - Conventional & HVLP

# Equipment

## Premium Topcoat 501

Viscosity	Zahn #2: ≈ 15 - 18 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.040 - 0.050) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	0.8 - 1.3 mm (0.040 - 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP
Airmix Equipment	0.18 - 0.23 mm (0.007 - 0.009)
Inlet pressure	3.0 - 5.0 bar (42 - 70 PSI)

## Non Skid

See Premium Topcoat 501

## Flattening Additive

See Premium Topcoat 501

## Metallic Base Coat

Viscosity	Zahn #2: ≈ 22 - 28 sec, DIN 4 cup 4mm: ≈ 14 - 18 sec
Nozzle Size Gravity Gun	1.2 - 1.4 mm (0.042 - 0.055)
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.051)
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI)
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI)

## Metallic Clear Gloss

Viscosity	Zahn #2: ≈ 15 - 17 sec, DIN 4 cup 4mm: ≈ 12 - 14 sec
Nozzle Size Gravity Gun	1.0 mm - 1.4 mm (0.040 - 0.055) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP

# Equipment

## Waterborne Topcoat

Viscosity	Zahn #2: ≈ 37 - 50 sec, DIN 4 cup 4mm: ≈ 30 - 40 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.040 - 0.050) - Conventional & HVLP
Nozzle Size Siphon Cup	1.2 - 1.6 mm (0.046 - 0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.2 mm (0.040 - 0.042) - Conventional & HVLP
Atomizing Pressure	3.0 - 3.5 bar (42 - 50 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP

## Suede Primer 701

Viscosity	Zahn #2: ≈ 28 - 32 sec, DIN 4 cup 4mm: ≈ 18 - 22 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.04 - 0.055) - Conventional & HVLP
Nozzle Size Siphon Cup	1.4 - 1.6 mm (0.061 - 0.070) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.2 mm (0.04 - 0.046) - Conventional & HVLP
Atomizing Pressure	3.0 - 4.0 bar (42 - 56 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP

## Suede Coating 702

Viscosity	Zahn #2: ≈ 50 - 75 sec, DIN 4 cup 4mm: ≈ 40 - 60 sec
Nozzle Size Gravity Gun	1.5 - 1.8 mm (0.059 - 0.070)
Nozzle Size Siphon Cup	1.4 - 1.8 mm (0.055 - 0.070)
Fluid Nozzle Size Pressure Pot	1.4 mm (0.055)
Atomizing Pressure	3.0 - 4.0 bar (42 - 56 PSI)
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI)

## Interior Urethane Coating

Viscosity	Zahn #2: ≈ 15 - 18 sec, DIN 4 cup 4mm: ≈ 12 - 18 sec
Nozzle Size Gravity Gun	1.2 mm - 1.6 mm (0.047 - 0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP
Airless Equipment	0.18 - 0.28 mm (0.007 - 0.011) Inlet pressure 3.0 - 5.0 bar (42 - 70 PSI)

# Project Considerations

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## Coating Compatibility

Prior to beginning application of any ALEXSEAL® system over a previously painted surface, the surface should be inspected and tested to ensure the existing coating is adhering to the substrate and will not be damaged by contact with a solvent. Most two-part polyurethanes and two-part epoxy primers should pass this inspection.

This cross cutting test should meet standards that comply with ISO/DIN 2409. The result of the cross cutting test shows the adhesiveness of paint or coatings on the underlying coatings and surface, It indicates the adhesiveness of the individual layers among each other. During this test, the adhesiveness is determined by cutting into the previously painted surface in crosshatch pattern.

Blistering or delamination occurring under the current paint and fairing system because of corrosion or adhesion failure must be removed by grinding with 24 - 36 grit. Spot sand or grit blast to remove corrosion from steel surfaces and oxidation from pitting in aluminum. Sand down to a solid layer or to the substrate. The edges of any blisters or delaminating areas should be feathered back to a minimum of a 6:1 feather to thickness ratio (30° - 45° angle). Bare metal should be prepared as per the metal instructions described in [“Substrate Preparation & Priming” starting on page 26](#). Use the following ALEXSEAL® products to seal, fill, and fair in the damaged areas to prepare the surface for finish primer:

- ALEXSEAL® Protective Primers 161, 156 or 135 to seal metal
- ALEXSEAL® Fairing Compound 202 to fill voids caused by removing blisters and other surface defects
- ALEXSEAL® Super Build 302 for heavy surfacing

All surfaces should be cleaned using clean dry compressed air and clean rags to remove all dust before product applications throughout the system. Wipe down the surface with ALEXSEAL® Wipe Down Solvent (A9049) using the [“Two Rag Cleaning Method” starting on page 31](#) and perform final dust removal with a tack rag before top coating.

In order to assure proper finish coat adhesion, substrates need to be prepared and conditioned to accept initial priming, fairing and surfacing prior to application of a finish coat.

## Crosshatch Adhesion Test

If there is any question of current system or underlying coating systems integrity on this substrate, a crosshatch adhesion test and a solvent test should be performed.



### Important:

This is a destructive test and will require additional surface preparation in the area where the test is performed.

Using a razor blade or knife, cut into the coatings systems currently on the substrate at a 90° angle. Create straight cuts approximately 5 cm (2 inches) long. Cut perpendicularly across these cuts for approximately 5 cm (2 inches) to create ~ 6.35 mm (0.25 inches) boxes. Apply an adhesive-intense tape such as packing or sealing

# Project Considerations

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tape and push down firmly. Remove the tape by pulling quickly at a 90° angle. The coating should stay secure in the crosshatch boxes. If it does not, then all of the old coating should be removed until a stable surface is obtained.

## Solvent Test

Saturate a cotton ball or a small folded piece of cloth with one of the ALEXSEAL® Reducers from the Premium Topcoat 501 or Finish Primer 442 product range. Tape the saturated piece to the hull and also to the crosshatch test area if one was performed. Allow the saturated piece to remain taped to the surface for 15 minutes, then remove and inspect the surface. The old coating may soften, but should not wrinkle, melt or dissolve.

- If the surface does not pass these tests, the coating or coatings should be completely removed and the surface prepared as described in [“Substrate Preparation & Priming” on page 26](#).
- If the surface does pass the tests, then repair the test areas and any other surface defects prior to the application of primer and topcoat.

## Repairing the Test Areas

Thoroughly clean the surface using ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#). Additional cleaning may be performed using a household cleanser and 3M Scotch-Brite® pads to scrub the surface to be painted. When rinsing the surface with clean water, the water should sheet out indicating a clean surface. Any breaks in the water film can indicate release agents and or other contaminants present on the surface. Additional cleaning would be necessary if this condition occurs.

The current coating in the test area should be sanded with 100 - 150 grit. If break-through to metal substrate occurs, spot prime these areas with an Alexseal® Protective Primer (Protective Primer 161, CF Metal Primer 156 or Cor Spec 135).

## Additional Notes

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# Surface Preparation

## Ensure a Clean Surface

A clean, dry surface is essential to the success of any coatings application. ALEXSEAL® provides effective products and guidance engineered to prepare all types of surfaces prior to application. It is critical to use appropriate products and procedures to prepare the surface in order to assure proper adhesion.



### Important:

**Be sure all contaminants have been removed before sanding!**

Sanding can grind or fuse wax, grease, oils and residue into the surface making it impossible to obtain a clean surface. Follow the cleaning directions to avoid contaminants in the prepared surface.

## Pre-Washing

It is recommended to remove surface contaminants before scraping or sanding. Clean the surface by scrubbing with a professional cleaner or powdered cleanser and an abrasive pad such as a 3M Scotch-Brite™. Monitoring the color and consistency of the rinse water is an effective way to determine if the surface is clean. Be sure to use a clean hose and / or change the rinse water regularly to avoid contaminating cleaned areas. Breaks, holes or beading of the rinse water indicates areas that may need additional preparation. It is important to use clean water and a hose that is not contaminated with oils or other foreign matter.



### Tip:

If you would not drink the water from the hose, then do not use it to wash or rinse the surface.

Some situations will prevent the use of water during the pre-washing procedure. These might include cleaning an interior space or a surface that is not sealed and would allow water to enter into an interior compartment. If this is the case, use the ALEXSEAL® Surface Degreaser / Dewaxer (A9091) with the [“Two Rag Cleaning Method” starting on page 31](#).

**ALEXSEAL® Surface Degreaser/Dewaxer (A9091)** is a wax and grease remover used to remove wax and other contaminants from gelcoat, painted surfaces and metal prior to priming. This is important for new hulls, decks and components that have been released from a mold, or an older boat with considerable wax buildup. This initial removal prior to sanding can also be performed on metal to remove grease or other petroleum/paraffin contaminants.



### Important:

**DO NOT use ALEXSEAL® Surface Degreaser/Dewaxer (A9091) as a final cleaning solvent.** This product will melt the sand scratches and sanding pattern on fresh primer, resulting in poor adhesion.



### Note:

Prior to every product application, all surfaces should be cleaned using clean, dry compressed air and clean rags to remove all dust before product application. After applying High Build Surfacer such as ALEXSEAL® Super Build 302 or ALEXSEAL® Finish Primer 442, an additional solvent wipe down with ALEXSEAL® Wipe Down Solvent (A9049) using the [“Two Rag Cleaning Method” starting on page 31](#)

# Surface Preparation

is recommended to ensure complete removal of surface contamination. A final dust removal with a high quality tack rag is recommended before top coating.

**ALEXSEAL® Wipe Down Solvent (A9049)** is a mild solvent used for removing sanding dust and mild contaminants like fingerprints before applying finish primer or topcoat. This mild solvent may be used for final wipe down prior to any topcoat application or anytime a general cleaning is required.

## Sanding The Surface

Prior to sanding, be sure the surface is clean and free of any wax, oil or other contaminants.



### Caution:

Assure proper ventilation and air circulation when performing sanding or grinding. A continuous flow of fresh air is necessary for both safety and keeping the surface being prepared free from additional contaminate particles. It is important to monitor the quality of the air for dust and other particulate matter as well as temperature and humidity.

Be sure the work area is free of tripping hazards and non-essential equipment and materials to prevent interference with an effective workflow and access to all areas of the work surface. Access to all areas of the work surface should be as simple as possible to get to.

ALWAYS wear protective clothing and safety gear to prevent sanding and grinding dust from coming in contact with skin or eyes.

DO NOT breathe sanding or grinding dust. Wear a commercially rated respirator outfitted with a new or clean cartridge or mechanical filter during sanding, grinding, and blowing operations. The respirator must have a good seal over the face to avoid particles from seeping in.

DO NOT allow other personnel in an area where sanding, grinding or blowing is occurring without proper safety equipment, clothing and training.

Proper sanding is crucial for adhesion of coatings. Sanding increases surface area when done correctly. This gives a coating additional surface area to bind to chemically and mechanically. Over-sanding or using too coarse of a grit for the application may result in a marred surface that will not take additional coatings well. Defects such as small holes or dimples in the surface, or scratches from sanding can occur and be too deep to be filled by the next product to be applied.

## Guide Coats

Guide coats are sprayed or wiped on the surface of primers and surfacers to allow the person sanding to see where they have sanded and how much material has been removed. Quite often when sanding a white surface, the person(s) doing the work will become “snow blind” and will not be able to see if they missed an area. It is recommended to use a compatible dye, dry guide coat or spray-on coating that dries quickly without penetrating or softening the Super Build 302, Finish Primer 442 or topcoat (if sanding). The guide coat should not clog sandpaper or cause any adverse



# Substrate Preparation & Priming

## Gelcoat & Fiberglass Resin Substrate

The gelcoat substrate must be cleaned thoroughly of all surface contamination prior to sanding with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).

Additional cleaning may also be performed using a professional cleaner/degreaser or a powdered cleanser (such as Ajax® or Comet®) and 3M Scotch-Brite® pads to scrub the surface to be painted. When rinsing the surface with clean water, the water should sheet out “break-free” – indicating a clean surface. Any breaks in the water film can indicate release agents and or other contamination present on the surface.

All resin and gelcoat substrates must be completely cured and solvent resistant.

**Gelcoat substrates** should be sanded with 100 - 150 grit until a surface profile of 1 mil (20 - 35 microns) is achieved. After sanding, remove dust and residual debris with clean compressed air. Wipe down the surface with ALEXSEAL® Surface Degreaser / Dewaxer (A9091).

**Raw resin substrates** must be ground 100% dull (no shiny spots or pits) with 36 - 60 grit.

After sanding and grinding as required, remove dust and residual debris with clean compressed air.



### Important:

DO NOT use solvents to wipe or clean raw resin areas after grinding and sanding. This will soften the resin and could affect the adhesion to the paint and fairing system.

Once the surface is properly prepared, you may proceed to fill and fair the surface as needed. If no filling and fairing is required, you may proceed to the application of ALEXSEAL® Finish Primer 442 and/or an ALEXSEAL® Topcoat. According to the needs of your application, please see the following sections:

- [“Fairing” starting on page 32](#)
- [“Surfacing” on page 36](#)
- [“Final Priming & Sealing” starting on page 39](#)
- [“Finishing” starting on page 41](#)

## Wood Substrate

It is important to note that when applying paint to solid or composite wood substrates, there are additional concerns of moisture and temperature that cause both physical and chemical variations in the wood. Exposed wood may expand and contract creating gaps, fissures and imperfections, requiring additional sanding and priming beyond what is done for other surfaces.



### Important:

ALEXSEAL® Premium Topcoat 501 may crack when applied over joined edges or seams. When preparing wood surfaces that are planked or have a large number of seamed or joined areas, special attention should be paid to assuring that

# Substrate Preparation & Priming

these areas are adequately filled and prepared to create a uniform, sealed surface over the wood substrate. Substrate lumber material should be fully cured and have moisture content of less than 15%. DO NOT use pressure treated wood, as the ALEXSEAL® system will not adhere to this type of wood treatment.

All wooden substrates must be cleaned thoroughly of surface contamination prior to sanding with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).

All wood surfaces must be completely dry, cured out and solvent resistant. Exposed wood must be initially sanded with 80 - 100 grit sandpaper. If grinding is required to remove extensive deposits or built up material, use caution to avoid marring or deeply scratching the base wood surface.



### Important:

DO NOT use slow evaporating solvents to wipe or clean prepared areas after grinding or sanding. Solvents will be absorbed by the wood and could affect adhesion to the paint or fairing system. Clean virgin denatured alcohol may be used to remove oils from the wood that are exposed during the sanding process. Wooden surfaces should end up being sanded with 180 - 220 grit sandpaper to achieve a proper profile for priming. It is a good practice to vacuum and use clean compressed air to remove fine sawdust and residual particles immediately before applying any primer.

If required, seams can be filled with a polyurethane seam-sealing compound. Allow the sealer to thoroughly cure before proceeding.



### Note:

Polyurethane and polysulfide compounds have a certain amount of flex which will move with the wood and prevent cracking or deforming to a certain extent. Boats with dynamic seams may flex beyond the adhesion characteristics of these compounds, which can result in cracking of the ALEXSEAL® topcoat. **Be sure you DO NOT use any silicone-based caulk or compounds in this process.**

Apply a sealer coat of high quality epoxy resin or ALEXSEAL® Finish Primer 442 to seal the wood surface. This should occur within 24 hours of the sanded wood preparation, provided that the painting facility is relatively dry and maintains low humidity to prevent the exposed wood from absorbing moisture.

When sealing the wood with an epoxy resin, apply multiple coats of a high quality, clear epoxy resin per the manufacturer's recommendations. Always wash down the cured epoxy resin surface with water before sanding and applying additional products.

When sealing the wood with ALEXSEAL® Finish Primer 442, refer to instructions in the [“Technical Data Sheets” starting on page 62](#). The first coat of primer should be reduced 30 - 40% to allow for the sealer coat to soak into the grain. After the sealer coat has been allowed to dry overnight – but not more than 24 hours – at 25° C (77° F) apply two to three additional coats of Finish Primer 442 mixed and reduced as described in the Technical Data Sheet. If more than 24 hours passes before applying additional coats of primer, the surface must be sanded with 180 - 220 grit sandpaper.

## Substrate Preparation & Priming

Always use ALEXSEAL® Wipe Down Solvent (A9049) **AFTER** the primer has been applied. Use ALEXSEAL® Surface Degreaser / Dewaxer (A9091) or virgin denatured alcohol to remove oils from the wood after sanding and prior to the application of primer.

Once the surface is properly prepared, you may proceed to fill and fair the surface as needed. If no filling or fairing is required, you may proceed to the application of ALEXSEAL® Finish Primer 442 and ALEXSEAL® Premium Topcoat 501. According to the needs of your application, please see the following sections:

- [“Fairing” starting on page 32](#)
- [“Surfacing” on page 36](#)
- [“Final Priming & Sealing” starting on page 39](#)
- [“Finishing” starting on page 41](#)

### Aluminum Substrate

Degrease the aluminum substrate with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).

To achieve optimum adhesion and performance, the aluminum should be ground with 36 - 60 grit or sand/grit blasted to a 2 - 4 mil (50 - 100 micron) profile and a very clean, silver/white appearance.



#### Important:

DO NOT wipe the surface with rags after blasting or grinding. The aluminum surface will snag fibers that will act as wicks through the protective primer and could decrease corrosion resistance.

Abraded aluminum surfaces should be cleaned using clean, dry compressed air and a bristle or nylon broom to remove all dust before product application.

Application of ALEXSEAL® Protective Primers should occur as soon as possible (within 12 hours) after the abraded or blasted metal preparation, provided the painting facility is located away from coastal saltwater regions and the aluminum substrate is kept indoors, dry and clean. Aluminum will begin to oxidize immediately after sanding or blasting, and this process will be more rapid in coastal locations. For the best adhesion, surfaces should be primed as quickly as possible after preparation.

During the system application, after the application of the ALEXSEAL® Protective Primers, all surfaces should be cleaned using clean, dry compressed air and clean rags to remove all dust before product applications throughout the system. Apply ALEXSEAL® Protective Primers in accordance with their respective [“Technical Data Sheets” starting on page 62](#).

Once the surface is primed with Protective Primer 161, CF Metal Primer 156, or Cor Spec 135, you may proceed to fill and fair the surface as needed. If no filling and fairing is required, you may proceed to the application of ALEXSEAL® Finish Primer 442 and/or an ALEXSEAL® Topcoat.

## Substrate Preparation & Priming

According to the needs of your application, please see the following sections:

- [“Fairing” starting on page 32](#)
- [“Surfacing” on page 36](#)
- [“Final Priming & Sealing” starting on page 39](#)
- [“Finishing” starting on page 41](#)

### Steel Substrate

Degrease the steel substrate with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).

To achieve optimum adhesion and performance, steel should be prepared by sand/grit blasting to near-white metal Sa 2.5 (SSPC-SP10-85) and/or ground with 36 - 60 grit to a 2 - 4 mil (50 - 100 micron) profile.



#### Important:

DO NOT wipe the surface with rags after blasting or grinding. The steel surface will snag fibers that will act as wicks through the protective primer and could decrease corrosion resistance.

Steel surfaces should be cleaned using clean, dry compressed air and a bristle or nylon broom to remove all dust before product application.

After the application of an ALEXSEAL® Protective Primer, but before each subsequent product application, all surfaces should be cleaned using clean, dry compressed air and clean rags to remove all dust and contaminants.

Application of ALEXSEAL® Protective Primers should occur as soon as possible (within 12 hours) after the abraded or blasted metal preparation, provided the painting facility is located away from coastal saltwater regions and the aluminum substrate is kept indoors, dry and clean. Apply ALEXSEAL® Protective Primers in accordance with their respective [“Technical Data Sheets” starting on page 62](#).

Once the surface is primed with Protective Primer 161, CF Metal Primer 156, or Cor Spec 135, you may proceed to fill and fair the surface as needed. If no filling and fairing is required, you may proceed to the application of ALEXSEAL® Finish Primer 442 and/or an ALEXSEAL® Topcoat. According to the needs of your application, please see the following sections:

- [“Fairing” starting on page 32](#)
- [“Surfacing” on page 36](#)
- [“Final Priming & Sealing” starting on page 39](#)
- [“Finishing” starting on page 41](#)

# Substrate Preparation & Priming

## ALEXSEAL® Protective Primers

ALEXSEAL® Protective Primers have unique chemical inhibitors and bonding agents that have been formulated to be applied only over substrate materials. The ALEXSEAL® line of Protective Primers is comprised of the following products:

**ALEXSEAL® Protective Primer 161** is an epoxy based primer used for interior and exterior applications. Due to specific corrosion inhibitors and a combination of epoxy resin binding agents, this primer offers excellent adhesion promotion on all substrates as well as corrosion protection on steel and aluminium substrates. ALEXSEAL® Protective Primer 161 can be used for corrosion protection and adhesion promotion on steel and aluminium substrates, both above and below the waterline. This product is unique in that a surface primed with 161 can stand for up to 6 months and still be overcoated without the need for sanding.

**ALEXSEAL® CF Metal Primer 156** is a chromate-free, high solid, epoxy-based primer designed for priming metal surfaces where excellent corrosion protection and chemical resistance is required. ALEXSEAL® CF Metal Primer 156 is designed to prime and seal new and old, properly prepared, metal surfaces prior to the application of ALEXSEAL® Topcoats or ALEXSEAL® Finish Primer 442. This product is ideal for masts, hardware parts and thin gauge metals where minimal fairing is required. It may be directly finished with topcoat or primed, depending on the application requirements. ALEXSEAL® CF Metal Primer 156 may be used above and below the waterline.

**ALEXSEAL® Cor Spec Primer 135** is a chromate-containing, two component epoxy primer for use on metal substrates. This product is highly resistant to corrosion and chemicals. ALEXSEAL® Cor Spec Primer 135 is designed to prime and seal old and new, properly prepared, metal surfaces prior to the application of ALEXSEAL® Topcoats or ALEXSEAL® Finish Primer 442. This product is ideal for masts, parts and metal substrates. It may be directly finished with topcoat or primed, depending on the application requirements. Cor Spec Primer 135 may be used above and below the waterline.

**ALEXSEAL® Wash Primer 133** is a vinyl based zinc chromate two component primer used to inhibit corrosion and promote adhesion to metal substrates including anodized aluminum, stainless steel, and de-oiled washed galvanized steel. This product is designed to prime and seal old and new, properly prepared, metal surfaces prior to the application of ALEXSEAL® topcoats or finish primers. This product is ideal for masts, parts and thin gauge metal where minimal fairing is required. It may be top coated or primed depending on the application requirements. Wash Primer 133 may be used above and below the waterline.

Once the surface is primed you may proceed to fill and fair the surface as needed. If no filling and fairing is required, you may proceed to the application of ALEXSEAL® Finish Primer 442 and/or an ALEXSEAL® Topcoat. According to the needs of your application, please see the following sections:

- [“Fairing” starting on page 32](#)
- [“Surfacing” on page 36](#)
- [“Final Priming & Sealing” starting on page 39](#)
- [“Finishing” starting on page 41](#)

# Substrate Preparation & Priming

## Final Preparation for All Substrates: Two Rag Cleaning Method



### Important:

Before moving on to the application of fairing compound, surfacing products or topcoats, it is important to follow these steps to make certain the surface is free of particles of and contaminants of all sizes. Failing to follow this process could result in subsequent coatings not bonding properly, and defects that may become apparent after the finish coats are applied.

**Step 1:** Use a shop vacuum or clean, dry compressed air source to remove dust and particulates from the surface while wiping with a clean, oil free, and dry cotton cloth.

**Step 2:** Wet one cloth with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) or ALEXSEAL® Wipe Down Solvent (A9049). Use this cloth to wet the surface and loosen contaminants. For information on choosing between the Surface Degreaser / Dewaxer and Wipe Down Solvent products, please see [“Surface Preparation” starting on page 22](#).

**Step 3:** Use the dry, second cloth to wipe the surface and lift away or remove contaminants. Work small areas – approximately 1.2 m<sup>2</sup> (4 sq. ft.) or less – to keep the solvent from evaporating before using the second rag to wipe clean. DO NOT allow the solvent to dry on the surface prior to wiping it off.

Repeat steps 2 and 3 – always keeping the rags clean – until the surface is clear of any contaminants.



### Important:

Using only one, wet cloth only serves to thin and dissolve contaminants before simply spreading them around. Be sure the cloths used in procedure do not have any contaminants.

**DO NOT use pretreated shop towels!** Industrial paper towels are good choices to use for wiping down the surface, provided they do not have any chemical or pre-treated additives. When solvent wiping for ALEXSEAL® Finish Primer 442, verify the entire surface is completely dry before using tack rags.



### Tip:

Use the [“Application Record” starting on page 138](#) to document your application process, equipment settings and environmental conditions for future reference. We'd recommend you make photo copies or print copies from the online resources available at [www.alexseal.com](http://www.alexseal.com).

# Fairing

Fairing is the process of creating or shaping a smooth line, edge or surface, free of hollows or bumps. ALEXSEAL® Fairing Compound 202, Fine Filler 303, Super Build 302, and Spray Fair 328 are superior products for fairing surfaces above and below the waterline.

## ALEXSEAL® 202 Fairing System

ALEXSEAL® Fairing Compound 202 is used to fill and fair surface imperfections prior to applying Fine Filler 303, Super Build 302, and Spray Fair 328.



### Important:

It is critical that no polyester filler is applied directly below or directly on top of ALEXSEAL® 202 Fairing Compound. Polyester fillers are not designed for heavy filling or fairing. It is also important that 202 Fairing Compound is not applied over caulk or any other soft product.

The substrate must be clean, dry and free from dust, grease, oil and other contamination. The substrate should be properly prepared as described in [“Substrate Preparation & Priming” starting on page 26](#).

The components of ALEXSEAL® Fairing Compound 202 have different colors to control the mixing process. After mixing, the color of the fillers should be a homogeneous color. If the base and converter are not mixed thoroughly, it could result in an improperly cured batch. Mixing can be done mechanically with slow turning dough mixers, specially designed mixing machines or manually.



### Important:

DO NOT use drill mixers. The introduction of air bubbles should be avoided.

The fairing material is easily applied by spatula or trowel with careful attention to avoid the introduction of air pockets. Applying the product to the surface in thin layers of approximately 5mm (1/4”) and working up to the desired thickness before pulling the product out with a straight edge, will help avoid creating air pockets in the applied product.

For equipment cleaning, use ALEXSEAL® Epoxy Primer Reducer (R4042). ALEXSEAL® Fairing Compound 202 should be block sanded with 36 - 120 grit. Block sanding with 80 grit or finer will help prevent sand scratch print-through in the finished system.

## Procedure For Application of ALEXSEAL® Fairing Compound 202

1. Using a straight edge, check the surface for low spots. Mark any areas over 0.4mm (1/64<sup>th</sup>) of an inch) with a standard pencil.
2. Mix ALEXSEAL® 202 base and converter, 1 to 1 by volume (Standard Base P2094, Thick Base P2083; Standard Converter C2075, Fast Converter C2017). Apply to the surface with a trowel or putty knife, spreading the material sideways where needed and pull smooth with a straight edge. Allow to cure overnight.
3. Using a board sander and 36 - 60 grit sandpaper, sand the surface. Check the surface with a straight edge and mark the low areas with a pencil. Remove

# Fairing

all sanding dust and residue. **All sanding dust must be removed before proceeding.**

4. Re-trowel areas marked with pencil and repeat steps 1, 2, and 3. When applying more than one application of ALEXSEAL® Fairing Compound 202, it is necessary to sand and remove all sanding dust to assure good adhesion. Continue the process until any depressions are fair or less than 0.4mm (1/64<sup>th</sup> of an inch).
5. Remove all surface dust and residue. **All surface dust and residue must be removed before proceeding.**

After the surface is faired to the desired quality with ALEXSEAL® Fairing Compound 202, it must be covered with ALEXSEAL® Super Build 302. Alternatively, Fine Filler 303 or Spray Fair 328 may be used as needed before the application of Super Build 302. Proceed to the appropriate portion of the Fairing or Surfacing sections for further instruction on applying Spray Fair 328, Fine Filler 303 and Super Build 302.



### Note:

Full fairing systems require a heavily abraded substrate. Thin fairing systems of less than 3 mm (0.125” - 0.012”) will require a less aggressive profile to anchor the system. When using ALEXSEAL® Fairing Compound 202 over metal substrates, optimum mechanical and corrosion resistance values are achieved by proper surface preparation and substrate priming with ALEXSEAL® Protective Primer 161. ALEXSEAL® Fairing Compound 202 may be applied directly to Protective Primer 161 without sanding for up to 6 months. When applying over GRP substrates, use ALEXSEAL® Super Build 302, Finish Primer 442, or Protective Primer 161 over a properly prepared surface. In some situations Fairing Compound 202 may be applied directly to a properly prepared gelcoat or fiberglass surface without protective priming. All ALEXSEAL® Primers, except 161 (see [“Technical Data Sheets” starting on page 62](#)) should be sanded with 60 - 80 grit after drying overnight, and before application of ALEXSEAL® Fairing Compound 202.



### Important:

Fairing Compound 202 must NOT be reduced.

## ALEXSEAL® Spray Fair 328 Fairing System

ALEXSEAL® Spray Fair 328 is an epoxy-based, sprayable filler surfacer, which provides the ideal product for yachts that require filling and fairing. ALEXSEAL® Spray Fair 328 has excellent application, sanding and anti-sagging properties. It is designed to be easy to mix and apply, while the cured film provides an excellent surface for re-coating with other ALEXSEAL® products. ALEXSEAL® Spray Fair 328 is used for fairing all appropriately prepared surfaces and can be used for surfaces above the waterline only.

ALEXSEAL® Spray Fair 328 is used to fill and fair surface imperfections prior to applying Super Build 302.



### Important:

It is critical that no polyester filler is applied directly below – or directly on top of – ALEXSEAL® 328 Spray Fair Compound. Polyester fillers are not designed



# Surfacing

Surfacing is the process of refining a surface that has been faired or is not in need of a full fairing system. Surfacing corrects minor imperfections in a surface and creates a more precise layer above a full fairing system. ALEXSEAL® Super Build 302 and Fine Filler 303 are superior products for surfaces that are faired, or do not require a full or thick fairing system application.

After imperfections such as ridges and holes are filled and corrected with fairing materials, a final surfacing process should be utilized to feather the material out. This creates a uniform surface that is consistent with the substrate. Surfacing takes a surface that is 95% faired, and smooths out the last remaining imperfections. Surfacing is the final filling step, which creates a uniform base that accepts a finish primer that seals the surface. This process increases the overall strength and integrity of the final coating while adding an intermediate protective barrier.

## ALEXSEAL® Fine Filler 303

ALEXSEAL® Fine Filler 303 is a solvent-free, epoxy-based filler which cures without shrinking. It cures as a water resistant solid coating. This is an ideal product to use between ALEXSEAL® Fairing Compound 202 and ALEXSEAL® Super Build 302 or ALEXSEAL® Finish Primer 442. Fine Filler 303 is used when a tight pull of fairing is required to fill small imperfections prior to applying a surfacer or finish primer. ALEXSEAL® Fine Filler 303 is used to fill and fair minor surface imperfections.



### Important:

It is critical that no polyester filler is applied directly below or directly on top of ALEXSEAL® Fine Filler 303. Polyester fillers are not designed for heavy filling or fairing. It is also important that Fine Filler 303 is not applied over caulk or any other soft product.

The substrate must be clean, dry and free from dust, grease, oil and other contamination. The substrate should be properly prepared as described in [“Substrate Preparation & Priming” starting on page 26](#). Optimum mechanical resistance values are achieved by proper surface preparation.

ALEXSEAL® Fine Filler 303 may be applied as a high film surfacer over ALEXSEAL® primers and fillers, or gelcoat and raw resin lay-up. The surface must be sanded with 80 - 150 grit. Fiberglass resin should be ground with 36 - 60 grit and/or sand blasted. The surface and the bottom of any fiberglass profile should be dull and abraded with no shiny spots.

ALEXSEAL® Fine Filler 303 is easily applied by spatula, trowel or other straight edge with careful attention to avoiding the introduction of air pockets. Applying the product to the surface in thin layers of 2 mm and working up to the desired thickness before pulling the product out with a straight edge, will help avoid creating air pockets in the applied product.

ALEXSEAL® Fine Filler 303 should be sealed with ALEXSEAL® Super Build 302 and ALEXSEAL® Finish Primer 442 prior to applying topcoat.

# Surfacing

The components of ALEXSEAL® Fine Filler 303 have different colors to control the mixing process. After mixing, the color of the fillers should be a homogeneous color. If the base and converter are not mixed thoroughly, it could result in an improperly cured batch. Mixing can be done mechanically with slow turning dough mixers or manually.



### Important:

DO NOT use drill mixers. The introduction of air bubbles should be avoided.

For equipment cleaning, use ALEXSEAL® Epoxy Primer Reducer (R4042). ALEXSEAL® Fine Filler 303 should be block sanded with 100 - 150 grit. Block sanding with 150 grit or finer will help prevent sand scratch print-through in the finished system.

## Procedure For Application of ALEXSEAL® Fine Filler 303

1. Mix ALEXSEAL® 303 base (P3033) and converter (C3034) 2 to 1 by volume. Apply to the surface with a trowel or putty knife and pull smooth with a straight edge. Allow to cure overnight.
2. Using a board sander and 100 - 150 grit paper, sand the surface. Check the surface with a straight edge and mark any low areas with pencil. Remove all sanding dust and residue. All sanding dust must be removed before proceeding.
3. Re-trowel areas marked with pencil and repeat steps 1 and 2. When applying more than one application of Fine Filler 303, it is necessary to sand and remove all sanding dust to assure good adhesion. Continue this process until any depressions are less than 0.4mm (1/64<sup>th</sup> of an inch).
4. Remove all surface dust and residue. All surface dust and residue must be removed before proceeding.

After the surface is faired to the desired quality using ALEXSEAL® Fine Filler 303, apply Super Build 302 or Finish Primer 442 to achieve a surface that is sealed, and ready for topcoat. Continue reading this section for instruction on using Super Build 302, or refer to [“Final Priming & Sealing” starting on page 39](#) for instruction on using Finish Primer 442.

## ALEXSEAL® 302 Super Build System

ALEXSEAL® Super Build 302 is an epoxy-based high build primer/surfacer which cures into a smooth, easy to sand, water resistant coating. ALEXSEAL® Super Build 302 has excellent spray characteristics and is fast drying to allow maximum efficiency while fairing. The cured film offers excellent mechanical resistance values. ALEXSEAL® Super Build 302 is used to seal ALEXSEAL® Fairing Compound 202 and to even out imperfections remaining after the filling and sanding process. It also is designed to be used as a smooth, non-porous surfacer prior to the application of ALEXSEAL® Finish Primer 442.

ALEXSEAL® Super Build 302 may be applied over sanded fillers such as ALEXSEAL® Fairing Compound 202, Spray Fair 328 or Fine Filler 303. After sanding the ALEXSEAL® Fairing Compounds with 60 - 150 grit, the surface must be cleaned and dusted off thoroughly before applying ALEXSEAL® Super Build 302. ALEXSEAL® Super Build 302

# Surfacing

may be applied as a high build surfacer directly over gelcoat and raw resin lay-up. Gelcoat must be sanded with 80 - 150 grit.

The substrate must be clean, dry and free from dust, grease, oil and other contamination.



## Note:

Old coatings must have good adhesion and chemical resistance, and must be sanded with 100 - 150 grit. If the old coating is of questionable quality, a compatibility test should be performed, as described in [“Project Considerations” starting on page 16](#).

ALEXSEAL® Super Build 302 should be sealed with ALEXSEAL® Finish Primer 442 prior to topcoating.

## Procedure For Application of ALEXSEAL® Super Build 302

1. Apply 2 to 3 coats to a wet film thickness (WFT) of 6 - 12 mils (150 - 300 microns) per coat. Maximum recommended film thickness during a spray application is 3 coats totaling 36 mils (960 microns) WFT, or 2 coats totaling 20 mils (500 microns) DFT.
2. After allowing to dry overnight, apply a guide coat to the surface, as described in [“Surface Preparation” starting on page 22](#).
3. Board sand the surface with 100 - 180 grit sandpaper. Sand until all of the guide coat is removed.
4. Remove sanding dust with clean cloths and clean, dry compressed air. If the guide coat remains visible in any areas of surface imperfections, mark these areas with a pencil. Wipe these imperfect areas (to remove the guide coat) with ALEXSEAL® Wipe Down Solvent (A9049) using the [“Two Rag Cleaning Method” starting on page 31](#).
5. Scuff sand the surface imperfections by hand with 100 - 180 grit sandpaper and remove dust.
6. Fill any imperfections with Fairing Compound 202 or Fine Filler 303; allow to dry, and then sand with 100 - 220 grit sandpaper.
7. Remove sanding dust with clean cloths and clean, dry compressed air. The surface should now be ready for application of ALEXSEAL® Finish Primer 442.

After the surface is faired to the desired quality using ALEXSEAL® Super Build 302, apply ALEXSEAL® Finish Primer 442 to achieve a surface that is sealed, and ready for topcoat. Proceed to [“Final Priming & Sealing” starting on page 39](#) for instruction on using Finish Primer 442.

# Final Priming & Sealing

Once a substrate has been faired and surfaced as necessary to achieve the expected quality of finish, the surface is ready for final finish priming and sealing. The surface should be abraded to a proper profile that is free of debris and contaminants before proceeding.

## ALEXSEAL® Finish Primer 442

ALEXSEAL® Finish Primer 442 is an epoxy-based finish primer offering advanced adhesion qualities over various substrates, exceptional sanding characteristics, and good film build up. Finish Primer 442 is designed to prime and seal old and new, properly prepared, stable surfaces such as gelcoat and fiberglass, as well as to seal other ALEXSEAL® primers and filler systems. Using this primer as a base greatly enhances the “Wet Look” of an ALEXSEAL® Topcoat. Finish Primer 442 may be used above and below the waterline.



## Important:

The following are notes for sealing ALEXSEAL® Fairing Compound 202, Fine Filler 303, Spray Fair 328 and Super Build 302 with Finishing Primer 442:

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

- Fiberglass and gelcoat can be coated directly with ALEXSEAL® Finish Primer 442 after sanding with 100 - 150 grit.
- Old coatings must have good adhesion and chemical resistance and must be sanded with 100 -150 grit. If the old coating is of questionable quality, a compatibility test should be performed, as described in [“Project Considerations” starting on page 16](#).
- Steel and Aluminum should initially be coated with an ALEXSEAL® Protective Primer before applying Finish Primer 442. For detailed metal preparation instructions, please see [“Substrate Preparation & Priming” starting on page 26](#).
- ALEXSEAL® Finish Primer 442 should only be applied over ALEXSEAL® Super Build 302 or Fine Filler 303 after block sanding with 100 - 150 grit. For instructions on application of these products, please see [“Surfacing” starting on page 36](#).

## Procedure For Application of ALEXSEAL® Finish Primer 442

1. Apply 2 or 3 coats to a wet film thickness (WFT) of 100 - 220 microns (4 - 8 mils) per coat. Maximum recommended film thickness during a spray application is 3 coats totaling 300 microns (12 mils) WFT, or 100 microns (4 mils) DFT.
2. After allowing to dry overnight, apply guide coat to the primed surface.
3. Machine sand the surface using 320 - 400 grit sandpaper until all of the guide coat is removed. Hand sanding should be done with a finer grit to prevent sanding marks.



# Finishing

Reducer type and content affects the overall drying time of the coating. ALEXSEAL® offers five different reducers to accommodate a variety of application conditions. Refer to the following chart to determine which reducer is best suited for your application. Refer to the appropriate TDS in [“Technical Data Sheets” starting on page 62](#) for each product’s specific suitability, mixing and application instructions.

Topcoat Reducer #	Speed	General Temperature Range
R5090	Fastest	15° - 18°C (50° - 65°F), also small parts 21° - 27°C (70° - 80°F)
R5070	Fast	16° - 21°C (60° - 75°F), also small parts 21° - 38°C (70° - 100°F)
R5050	Medium	21° - 27°C (70° - 80°F), also large areas 16° - 21°C (60° - 70°F)
R5030	Slow	24° - 38°C (75° - 100°F), also large areas 16° - 27°C (60° - 80°F), also Brush at 10° - 18°C (50° - 65°F)
R5015	Slowest Brush	Brush or use as a retarder (5% extra) for spray

## Procedure For Application of ALEXSEAL® Premium 501 Topcoat By Spray

After applying ALEXSEAL® Finish Primer 442 according to the procedure in the [“Technical Data Sheets” starting on page 62](#):

1. Clean area to be painted and sand with 320 - 400 grit to a uniform finish. Remove sanding residue and wipe the surface clean using the [“Two Rag Cleaning Method” starting on page 31](#). It is recommended that the ALEXSEAL® Topcoat be applied within 4 days (2 days if outside) after sanding to ensure adhesion.
2. Apply 2 - 3 coats to a wet film thickness (WFT) of 2 - 3 mils (50 - 75 microns) per coat. Allow 20 - 60 minutes tack up between coats. This will achieve a dry film thickness (DFT) of 1.5 - 2 mils (30 - 50 microns) for a 2 coat application. For a 3 coat application, this will achieve a dry film thickness (DFT) of 2 - 3 mils (50 - 70 microns). Maximum recommended film thickness during a spray application is 3 coats totalling 12 mils (300 microns) WFT, or 4 mils (100 microns) DFT. Please refer to the [“Technical Data Sheets” starting on page 62](#) for detailed application information regarding film thickness and recoat times.

## Procedure For Application of ALEXSEAL® Premium 501 Topcoat By Brush

After applying ALEXSEAL® Finish Primer 442 according to the procedure in the [“Technical Data Sheets” starting on page 62](#):

1. Clean area to be painted and sand with 320 - 400 grit to a uniform finish. Remove sanding residue and wipe the surface clean using the [“Two Rag Cleaning Method” starting on page 31](#). It is recommended that the ALEXSEAL® Topcoat should be applied within 4 days, 2 days if outside after sanding to ensure adhesion.
2. Apply 2 - 3 coats to a wet film thickness (WFT) of 2 - 3 mils (50 - 75 microns) per coat. Each coat should dry to a tape dry stage, 12 - 24 hrs. Sand with 320 - 400 between coats. Sanding in between coats smoothes the surface and removes imperfections prior to the application of a final gloss coat. Please refer to the [“Technical Data Sheets” starting on page 62](#) for full instructions on this product.

# Finishing

## Single-Stage Metallic Applications For Small Areas

ALEXSEAL® single-stage metallic colors are used for small areas and parts where a metallic finish is desired, such as stripes, accents & windshields. ALEXSEAL® single-stage metallic finishes produce a dramatic effect that creates a metallic, glossy surface using a single-stage polyurethane. This is achieved using one of the Premium Topcoat 501 metallic colors and – as opposed to the M Series paints – does not require Clear Glossing, but allows the applicator the option to apply Clear Gloss if desired.



### Important:

DO NOT use single-stage metallic (T Series) topcoats on large surfaces, as they are more prone to producing mottling or an uneven finish in the metallic over large areas. For larger surface areas, the M Series metallic coatings should be used. DO NOT attempt to brush or roll any ALEXSEAL® Metallic Coating – these coatings can only be applied by spray gun.

Application instructions for the single-stage (T Series) metallics are the same as for Premium Topcoat 501 solid colors.

## ALEXSEAL® Non Skid

ALEXSEAL® Non Skid is specifically developed to achieve non-skid textures. Although not an actual finish like other ALEXSEAL® Topcoats, ALEXSEAL® Non Skid is a transparent additive that can be sprayed or rolled onto deck surfaces or other areas that are apt to pose a slipping hazard if left untreated. Non Skid can be added to any of ALEXSEAL's topcoat products.

### Procedure For Application of ALEXSEAL® Non Skid

1. Clean and prime the area to be painted per the preparation instructions for Premium Topcoat 501.
2. Apply ALEXSEAL® Non Skid with a brush, roller or sprinkling technique. Refer to the Non Skid TDS within [“Technical Data Sheets” starting on page 62](#), as well as the TDS for the topcoat you are adding the Non Skid compound to.

## ALEXSEAL® Flattening Additive

ALEXSEAL® Flattening Additive is a matting paste for ALEXSEAL® Premium Topcoat 501. This product varies the degree of gloss without reducing the mechanical properties of the topcoat. Flattening Additive is ideal to use when a lower gloss level is desired to minimize glare and surface defects. ALEXSEAL® Flattening Additive may be added to any ALEXSEAL® Premium Topcoat 501 color base. This product is designed for spray application. Brush application may result in an uneven flat, or semi-gloss finish.

### Procedure For Application of ALEXSEAL® Flattening Additive

1. Prepare the surface in the same fashion as for ALEXSEAL® Premium 501 Topcoat.
2. Mix Flattening Additive with topcoat using the quantities and methods described in the appropriate [“Technical Data Sheets” starting on page 62](#).
3. Apply 2 - 3 cross hatch coats to a wet film thickness (WFT) of 2 - 3 mils (50 - 75 microns) per coat. Allow 20 - 60 minutes flash time between coats.

# Finishing



**Note:**  
ALEXSEAL® Flattening Additive is NOT intended to be applied with a brush or roller.

## ALEXSEAL® Metallic Base Coat & Clear Gloss

The ALEXSEAL® M Series is a two-step system consisting of a Metallic Base Coat followed by a final Clear application. ALEXSEAL® Metallic Base Coat provides superior inter-coat adhesion, and reduces the possibility of mottling or unevenness in the finish. The ALEXSEAL® Clear Gloss for Metallics is a two-component aliphatic polyester polyurethane which is used for the final finish. This gives the ALEXSEAL® Metallic System unsurpassed scratch and stain resistance while preventing discoloration of the Clear Gloss. It can be used internally or externally on areas of the yacht which are not subject to permanent water immersion. ALEXSEAL® Metallic Base Coat is available in standard factory-packaged colors and, upon request, in custom colors. Please refer to a current ALEXSEAL® Metallic Color Card (available separately upon request) or the [“Product Overview” starting on page 124](#) for colors and part numbers.

### Procedure For Application of ALEXSEAL® M Series Base Coat

Metallic Base Coat is intended to be part of a base coat / Clear Gloss finish. This system needs to be applied in 2 steps.

1. Apply ALEXSEAL® Metallic Base Coat by spray application using a cross coat application technique. A minimum of two medium wet cross coats at 50% reduction will be required before full hide of the substrate will be achieved. Multiple coats at 50% reduction may be required depending on the size and color(s) of the surface to be coated, and the colors being sprayed. Allow for a flash-off time / drying period of at least 30 minutes at 30°C (85°F). Longer times may be necessary for lower temperatures or higher humidity, up to a maximum of 4 hours between application of the individual coats.



**Important:**  
DO NOT attempt to apply ALEXSEAL® Metallic Base Coat if the relative humidity is above 80%. Surface temperature, air flow, direct or nondirect sunlight, quantity of reducer, and film thickness will effect times during application. During the drying phase the minimum temperature should be 15°C (60°F). Ideal temperature: 25°C (77°F).

2. After the Metallic Base Coat has dried a minimum of 2 hours at 30°C (85°F) and up to a maximum of 12 hours at 25°C (77°F), apply 2 - 3 coats of ALEXSEAL® Clear Gloss in order to seal the Base Coat.
3. To achieve a higher level of gloss and a more durable finish, a second application of 2 - 3 coats of ALEXSEAL® Clear Gloss may be needed. Careful sanding of the first Clear Gloss with 400 - 500 grit dry sandpaper or 500 - 600 grit wet sandpaper is possible after a period of at least 12 hours (4 days is optimal). This drying time depends heavily on temperature and humidity, please follow directions on appropriate [“Technical Data Sheets” starting on page 62](#) in order to avoid damaging the metallic base coat surface.

# Finishing



**Important:**  
DO NOT break through the Clear Gloss when sanding, as this can affect or change the color of the metallic base coat.

Metallic coatings are not considered repairable. Use these coatings only when a repairable finish is not necessary.

### Interior Topcoats

#### ALEXSEAL® Waterborne Topcoat

ALEXSEAL® Waterborne Topcoat is a water-reducible, two-component paint based on polyurethane technology. This is a low VOC (Volatile Organic Compound) coating that works well for interior areas. After curing, the material is characterized by high gloss retention and color resistance even under extreme climatic conditions. Moreover, the cured film is resistant to abrasion, scratching, solvents, chemicals, synthetic cooling agents and hydraulic oils. ALEXSEAL® Waterborne Topcoat is used in engine rooms and lockers as well as other surfaces where a waterborne product is desirable.



**Note:**  
Due to its above average adhesion properties, ALEXSEAL® Waterborne Topcoat may be applied directly to fiberglass. Drying time is highly dependent on proper airflow.

### Procedure For Application of ALEXSEAL® Waterborne Topcoat by Spray

1. Clean the surface so that it is dry and free from dust, grease and contaminants.
2. Apply 2 coats to a wet film thickness (WFT) of 2.5 - 3 mils (60 - 80 microns) per coat. Allow 60 minutes flash-off time between coats. Please refer to the [“Technical Data Sheets” starting on page 62](#) for full instructions on this product.

### Procedure For Application of ALEXSEAL® Waterborne Topcoat by Brush

1. Clean the surface so that it is dry and free from dust, grease and contaminants.
2. Apply 2 coats to a wet film thickness (WFT) of 2.5 - 3 mils (60 - 80 microns) per coat. Each coat should dry to a tape-dry stage, 12 - 24 hrs. Sand with 320 - 400 grit between coats. Please refer to the [“Technical Data Sheets” starting on page 62](#) for full instructions on this product.

# Specialty Applications

Painting boats frequently requires a process for a unique application. These may be unique procedures – or combinations of procedures – to prepare, prime and finish a surface. In this section we include some of the more common specialty applications with additional steps and techniques to achieve consistent and professional results.

## Painting Wood with ALEXSEAL® Clear Gloss

Before proceeding, prepare and clean the wood as described in the Wood Substrate Preparation section in [“Substrate Preparation & Priming” starting on page 26](#).



### Note:

The surface will require three or four clear applications in order to build up the proper film thickness. Up to twelve coats will be needed for an effective application. 3 - 4 coats per day is an acceptable practice. The final topcoat application is usually only 2 - 3 coats in order to maximize the flow-out. Follow mixing and application instructions for ALEXSEAL® Clear Gloss in the [“Technical Data Sheets” starting on page 62](#)

1. Sand bare wood smooth with 100 - 180 grit sandpaper.
2. It is recommended to seal the wood with a quality epoxy resin using a UV stable hardener. Consult your ALEXSEAL® representative for further information regarding sealing the wood prior to applying ALEXSEAL® Clear Gloss (T0125). ALEXSEAL® does not recommend applying T0125 directly to bare wood because the wood may dramatically discolor.
3. Machine sand the epoxy surface using 220 grit sandpaper to achieve an adequate surface profile for the finish coat.
4. Remove sanding dust with clean cloths and clean, dry compressed air. Wipe with ALEXSEAL® Wipe Down Solvent (A9049) using the [“Two Rag Cleaning Method” starting on page 31](#).
5. The surface is now ready for the first of three or four topcoat applications building up the proper film thickness. Apply ALEXSEAL® Clear Gloss. Apply 3 - 4 build-up coats to a wet film thickness (WFT) of 3 - 4 mils (75 - 100 microns) per coat.
6. Allow to dry overnight and sand with 320 - 400 grit. Finer grits are recommended for use on corners and curved surfaces to minimize coating removal.
7. Repeat steps 4 - 7 until 10 - 12 coats have been applied and the wood grain is completely filled and sealed.
8. Allow to dry overnight and sand with 320 grit.
9. Remove sanding dust with clean cloths and clean, dry compressed air. Wipe with ALEXSEAL® Wipe Down Solvent (A9049) using the [“Two Rag Cleaning Method” starting on page 31](#).
10. Apply the final 2 - 3 coats of ALEXSEAL® Clear Gloss (T0125) to a wet film thickness (WFT) of 2 - 3 mils (50 - 75 microns) per coat.

# Specialty Applications

## Priming & Surfacing Aluminum for Teak Overlay

Before proceeding, deck surfaces should be completely blasted to the substrate.

Degrease bare aluminum with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).

To achieve optimum adhesion and performance, previously painted and new aluminum should be ground with 36 - 60 grit and/or sand blast prepared to a 3 - 4 mil (75 - 100 microns) profile and a very clean, silver/white surface.



### Important:

DO NOT wipe the surface with rags after blasting or grinding. The aluminum surface will snag fibers, which will act as wicks through the protective primer and could decrease corrosion resistance.

Abraded aluminum surfaces should be cleaned using clean, dry compressed air and a bristle broom to remove all dust before product application.



### Note:

Application of ALEXSEAL® Protective Primer 161 should occur within 12 hours of the abraded or blasted metal preparation. Before each subsequent product application, all surfaces should be cleaned using clean, dry compressed air and clean rags to remove all dust and contaminants.

## Overview of Steps to Prime & Fair The Aluminum Substrate:

1. Apply ALEXSEAL® Protective Primer 161 per TDS recommendations or refer to Protective Primer 161 instructions in [“Substrate Preparation & Priming” starting on page 26](#)
2. Optional: Apply ALEXSEAL® Fairing Compound 202 as needed to achieve the desired fairing quality level. Fair the surface per TDS recommendations or refer to Fairing Compound 202 instructions within [“Fairing” starting on page 32](#).
3. Optional: Apply ALEXSEAL® Super Build 302, Fine Filler 303 or Protective Primer 161 as needed. Apply products per TDS recommendations or refer to instructions for Super Build 302 and Fine Filler 303 in [“Surfacing” starting on page 36](#) or Protective Primer 161 in [“Substrate Preparation & Priming” starting on page 26](#).
4. The surface is now sealed and ready for the teak deck preparation and installation.

# Specialty Applications

## Priming & Surfacing Steel for Teak Overlay

### Steel Substrate Preparation

Before proceeding, deck surfaces should be completely blasted to the substrate.

Degrease bare steel with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).

To achieve optimum adhesion and performance, previously painted and new steel should be prepared by sand blasting to near-white metal Sa 2.5 (SSPC-SP10-85) and/or ground with 36 - 60 grit to a 2 - 4 mil (50 - 100 microns) profile.



#### Important:

DO NOT wipe the surface with rags after blasting or grinding. The steel surface will snag fibers that will act as wicks through the protective primer and could decrease corrosion resistance.

Steel surfaces should be cleaned using clean, dry compressed air and a bristle broom to remove all dust before product application.

After the application of ALEXSEAL® Protective Primer 161, but before each subsequent product application, all surfaces should be cleaned using clean, dry compressed air and clean rags to remove all dust and contaminants.

### Overview of Steps to Prime & Fair The Steel Substrate:

1. Apply ALEXSEAL® Protective Primer 161 per the [“Technical Data Sheets” starting on page 62](#)
2. Optional: Apply ALEXSEAL® Fairing Compound 202 as needed to achieve the desired fairing quality level. Fair the surface per TDS recommendations or refer to Fairing Compound 202 instructions within [“Fairing” starting on page 32](#).
3. Optional: Apply ALEXSEAL® Super Build 302, Fine Filler 303 or Protective Primer 161 as needed. Apply products per TDS recommendations or refer to instructions for Super Build 302 and Fine Filler 303 in [“Surfacing” starting on page 36](#) or Protective Primer 161 in [“Substrate Preparation & Priming” starting on page 26](#).
4. The surface is now sealed and ready for the teak deck preparation and installation.

# Specialty Applications

## Coating Aluminum Surfaces with Minimal Fairing Needs

Surfaces and manufactured components composed of aluminum and aluminum-alloy are found in a variety of places on many vessels. These surfaces include – but are not limited to – sailboat spars, window and door frames, brackets and other miscellaneous parts.



#### Note:

**Most parts do not require a chemical pre-treatment prior to painting.** Recommended procedures for coating aluminum components typically fall into two categories; depending on whether the metal has been chemically pre-treated or not.

### Aluminum Surfaces Not Pretreated with Chemicals

1. Degrease the bare aluminum substrate with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).
2. To achieve optimum adhesion and performance, the aluminum should be sanded with 120 - 180 grit to a very clean, silver/white surface.
3. Abraded aluminum surfaces should be cleaned using clean, dry compressed air and a bristle broom to remove all dust before product application.



#### Important:

DO NOT wipe the surface with rags after sanding or grinding. The aluminum surface will snag fibers, which will act as wicks through the protective primer and could decrease corrosion resistance.



#### Note:

Application of an ALEXSEAL® Protective Primer should occur within 12 hours of the abraded metal preparation. CF Metal Primer 156 or Cor Spec Primer 135 are recommended where minimal or no fairing is required. Protective Primer 161 may also be used in this application, but the higher film thickness of Protective Primer 161 will create more surface texture in the final topcoat application if the surface is not sealed with Finish Primer 442 and sanded, prior to applying Premium Topcoat 501.

After the application of an ALEXSEAL® Protective Primer, but before each subsequent product application, all surfaces should be cleaned using clean, dry compressed air and clean rags to remove all dust and contaminants. An additional wipe down with ALEXSEAL® Wipe Down Solvent using the [“Two Rag Cleaning Method” starting on page 31](#) is recommended to ensure the removal of surface contamination. Final dust removal with a tack rag is also recommended before applying an ALEXSEAL® Topcoat.

### Overview of Steps to Prepare and Paint the Aluminum Surface:

1. Apply an ALEXSEAL® Protective Primer per the TDS recommendations or see instructions for Protective Primer 161, CF Metal Primer 156 and Cor Spec Primer 135 in [“Substrate Preparation & Priming” starting on page 26](#).
2. Based on the fairness quality level, proceed to steps 3, 4, or 5 as needed. If

# Specialty Applications

the fairness of the surface is of acceptable quality after applying an ALEXSEAL® Protective Primer, you may proceed directly to applying to topcoat (step 6).

- Optional: Apply ALEXSEAL® Fairing Compound 202 as needed to achieve the desired fairing quality level. Fair the surface per TDS recommendations or refer to Fairing Compound 202 instructions in [“Fairing” starting on page 32](#).
- Optional: Apply ALEXSEAL® Super Build 302 or Fine Filler 303 as needed. Apply surfacing products per TDS recommendations or refer to instructions for Super Build 302 and Fine Filler 303 in [“Surfacing” starting on page 36](#).
- Optional: Apply ALEXSEAL® Finish Primer 442 per TDS recommendations or refer to Finish Primer 442 instructions in [“Final Priming & Sealing” starting on page 39](#).
- Apply ALEXSEAL® Premium Topcoat 501 per TDS recommendations or refer to Premium Topcoat instructions in [“Finishing” starting on page 41](#).

## Aluminum Surfaces Pretreated with Chemicals

Chemical pretreatment is not allowed in all regions of the world due to environmental impact concerns. It is important to consult your local regulatory office to determine if chemical pre-treatment can be performed in your area.

Chemical pretreatment can improve the surface condition and provide longer service life if applied correctly. These treatments work by washing the surface of the bare aluminum with an acid cleanser and then treating the surface with a conversion coating which stops the oxidation of the aluminum. This process is very effective at creating a clean, paint-ready surface that will provide a long service life. In some situations acid cleanser may be used to clean the surface prior to the use of Alexseal Protective Primers.



### Caution:

The Pretreatment process creates wastewater that must be contained and disposed of properly in accordance with local government and environmental regulations.

Worker safety must be monitored to ensure that the chemicals do not come in contact with any part of the body.



### Important:

During the pretreatment process it is critical that ALL surfaces be completely rinsed with clean water. Residue left from the chemicals can dry on the surface and create corrosion on the aluminum.

Consult the manufacturer of the chemical pretreatment for additional information regarding the use and disposal of these chemicals.

# Specialty Applications

## Preparing Aluminum for Chemical Pretreatment

- Prior to using a chemical treatment, degrease the bare aluminum substrate with ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).
- To achieve optimum adhesion and performance, the aluminum should be sanded to a very clean surface. Use 36 - 60 grit for heavily faired projects and 120 - 180 grit on surfaces which require little or no surfacing and only requiring a protective primer and topcoat.
- Abraded aluminum surfaces should be cleaned using clean, dry compressed air and a bristle broom to remove all dust before chemical treatment.



### Important:

DO NOT wipe the surface with rags after sanding or grinding. The aluminum surface will snag fibers, which will act as wicks through the protective primer and could decrease corrosion resistance.

- Follow the manufacturer's instructions for application of the chemical pretreatment.



### Note:

Application of an ALEXSEAL® Protective Primer should occur after the pretreated surface has completely dried. CF Metal Primer 156 or Cor Spec Primer 135 are recommended where minimal or no fairing is required. Protective Primer 161 may also be used in this application, but the higher film thickness of Protective Primer 161 will create more surface texture in the final topcoat application if the surface is not sealed with Finish Primer 442 and sanded, prior to applying Premium Topcoat 501.

After the application of an ALEXSEAL® Protective Primer, but before each subsequent product application, all surfaces should be cleaned using clean, dry compressed air and clean rags to remove all dust and contaminants. An additional wipe down with ALEXSEAL® Wipe Down Solvent using the [“Two Rag Cleaning Method” starting on page 31](#) is recommended to ensure the removal of surface contamination. Final dust removal with a tack rag is also recommended before applying an ALEXSEAL® Topcoat.

## Overview of Steps to Prepare and Paint the Pretreated Aluminum Surface:

- Apply an ALEXSEAL® Protective Primer per the TDS recommendations or see instructions for Protective Primer 161, CF Metal Primer 156 and Cor Spec Primer 135 in [“Substrate Preparation & Priming” starting on page 26](#).
- Based on the fairness quality level, proceed to steps 3, 4, or 5 as needed. If the fairness of the surface is of acceptable quality after applying an ALEXSEAL® Protective Primer, you may proceed directly to applying to topcoat (step 6).
- Optional: Apply ALEXSEAL® Fairing Compound 202 as needed to achieve the desired fairing quality level. Fair the surface per TDS recommendations or refer to Fairing Compound 202 instructions in [“Fairing” starting on page 32](#).

# Specialty Applications

- Optional: Apply ALEXSEAL® Super Build 302 or Fine Filler 303 as needed. Apply surfacing products per TDS recommendations or refer to instructions for Super Build 302 and Fine Filler 303 in [“Surfacing” starting on page 36](#).
- Optional: Apply ALEXSEAL® Finish Primer 442 per TDS recommendations or refer to Finish Primer 442 instructions in [“Final Priming & Sealing” starting on page 39](#).
- Apply ALEXSEAL® Premium Topcoat 501 per TDS recommendations or refer to Premium Topcoat instructions in [“Finishing” starting on page 41](#).

## Coating Anodized Aluminum

Anodized Aluminum is specially treated to create a metal layer to protect against oxidation. Whenever painting an anodized aluminum surface, this layer has to be etched and primed with a wash primer for a paint finish to bond to the substrate. **Anodized aluminum components are typically smooth parts that will not need fairing or surfacing.**



### Important:

These components must be primed with ALEXSEAL® Wash Primer 133 before finishing in order to achieve a proper surface bond.

### Overview of Steps to Prepare and Paint Anodized Aluminum:

- Thoroughly clean the surface using ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).
- Anodized surfaces should then be sanded with 220 grit paper to “break” the anodized surface.
- Apply a thin coat of ALEXSEAL® Wash Primer 133 per the TDS recommendations and see additional instructions for Protective Primers and Wash Primer 133 in [“Substrate Preparation & Priming” starting on page 26](#). Make sure to let dry a minimum of 3 hours but not longer than 6 hours before overcoating with another product.



### Important:

DO NOT apply ALEXSEAL® Wash Primer 133 over an aluminum or anodized surface which has been treated with Alodine.

- Apply ALEXSEAL® Premium Topcoat 501 per TDS recommendations or refer to Premium Topcoat instructions in [“Finishing” starting on page 41](#).



### Note:

ALEXSEAL® Finish Primer 442 only needs to be applied over the ALEXSEAL® Wash Primer 133 if the surface needs to be faired or surfaced – otherwise topcoat can be applied directly to the ALEXSEAL® Wash Primer 133.

# Specialty Applications

## Coating Stainless Steel

Stainless steel is a durable iron alloy that was developed to be resilient to corrosion while remaining very strong. Although it is a steel surface, and the guidelines for Steel Substrates in [“Substrate Preparation & Priming” starting on page 26](#) should be followed, most stainless steel applications are applied to smooth “ready to paint” surfaces such as manufactured extrusion, polished parts or screw heads. These surfaces do not require any fairing and you can apply ALEXSEAL® Wash Primer 133 and overcoat directly with Topcoat 501 or M series Metallic. If fairing or surfacing is required, ALEXSEAL® Finish Primer 442 may be applied over the Wash Primer 133. If more surfacing or fairing is required a more aggressive abrasion is necessary to ensure adhesion of a multi layer system.

There are two suggested systems below, one for smooth stainless and one for a stainless surface which must be surfaced and/or faired.



### Important:

Stainless Steel components must be primed with ALEXSEAL® Wash Primer 133 or ALEXSEAL® Protective Primer 161 before finishing in order to achieve a proper surface bond.

### Overview of steps to prepare and paint stainless steel which is smooth “ready to paint” and clean for topcoat with no additional need for surfacing and or fairing:

- Thoroughly clean the surface using ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).
- To achieve optimum adhesion and performance, the surface should be prepared by scuffing with 280 - 320 grit dry sand paper.
- Clean the surface to be painted using clean dry compressed air and clean rags to remove all dust before product applications. An additional solvent wipe down with Alexseal® Wipe Down Solvent (A4049) using the two rag method is recommended to ensure the removal of surface contamination. A final dust removal with a tack rag is recommended before topcoating.
- Apply a thin coat of ALEXSEAL® Wash Primer 133 per the TDS recommendations, and see additional instructions for Wash Primer 133 in [“Substrate Preparation & Priming” starting on page 26](#). Make sure to let dry a minimum of 3 hours but not longer than 6 hours before overcoating with another product.
- Apply ALEXSEAL® Premium Topcoat 501 or M series Metallic per TDS recommendations or refer to Premium Topcoat instructions in [“Fairing” starting on page 32](#).

# Specialty Applications

## Overview Of Steps To Prepare And Paint Stainless Steel Which Needs Additional Surfacing And Or Fairing:

1. Thoroughly clean the surface using ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#).
2. To achieve optimum adhesion and performance, the surface should be prepared by sand blasting and/or ground with 36 - 80 grit to a 2 - 4 mil (50 - 100 microns) profile. The higher the thickness of Surfacing and Fairing, the more aggressive surface profile is needed.
3. Clean the surface to be painted using clean dry compressed air and a brush to remove all dust before product applications. DO NOT use rags, as the coarse profiled surface can snag the rag fibers.
4. There are two stainless steel metal primer choices:
  - A. Apply ALEXSEAL® Wash Primer 133 per the TDS recommendations and see additional instructions for Wash Primer 133 in [“Substrate Preparation & Priming” starting on page 26](#). Make sure to let dry a minimum of 3 hours but not longer than 6 hours before overcoating with another product such as ALEXSEAL® Protective Primer 161, ALEXSEAL® Super Build 302 or ALEXSEAL® Finish Primer 442 prior to the application of ALEXSEAL® Fairing Compound 202.
  - B. Apply ALEXSEAL® Protective Primer 161 per the TDS recommendations and see additional instructions for Protective Primer 161 in [“Substrate Preparation & Priming” starting on page 26](#). Make sure to let dry a minimum of 16 hours before over coating with another product such as ALEXSEAL® Fairing Compound 202, ALEXSEAL® Super Build 302 or ALEXSEAL® Finish Primer 442.
5. Optional Fairing: Fairing Compound 202 may be applied over ALEXSEAL® Protective Primer 161, ALEXSEAL® Super Build 302 or ALEXSEAL® Finish Primer 442. Apply ALEXSEAL® Fairing Compound 202 as needed to achieve the desired fairing quality level. Fair the surface per TDS recommendations or refer to Fairing Compound 202 instructions in [“Fairing” starting on page 32](#).
6. Optional High Build Surfacing: Apply ALEXSEAL® Super Build 302 or Fine Filler 303 as needed. Apply surfacing products per TDS recommendations or refer to instructions for Super Build 302 and Fine Filler 303 in [“Surfacing” starting on page 36](#).
7. Optional Final Priming and Sealing: If fairing and surfacing was done, apply ALEXSEAL® Finish Primer 442 per TDS recommendations or refer to Finish Primer 442 instructions in [“Final Priming & Sealing” starting on page 39](#).
8. Apply ALEXSEAL® Premium Topcoat 501 or M series per TDS recommendations or refer to Premium Topcoat instructions in [“Finishing” starting on page 41](#).

# Specialty Applications

## Coating Copper or Bronze

Copper and related alloys such as bronze oxidize freely. It is common to see “green” parts on boats – as well as buildings, homes and decorations. This oxidation can only be prevented by preparing the substrate and then immediately applying a coating such as ALEXSEAL® Clear Gloss (TO125) to prevent oxidation on areas such as through-hull fittings. Copper and bronze may be painted with ALEXSEAL® Finish Primer 442 and Premium Topcoat 501 if desired, but is not a very common practice. Most owners/captains choose to only apply a Clear Gloss to these surfaces in order to protect them from oxidation, and maintain their original color.

## Overview of Steps to Prepare and Paint Copper or Bronze:

1. Thoroughly clean the surface using ALEXSEAL® Surface Degreaser / Dewaxer (A9091) using the [“Two Rag Cleaning Method” starting on page 31](#). Be sure all detergent residue is rinsed from the surface. Use Wipe Down Solvent (A9049) for final surface preparation, also using the Two Rag Cleaning Method.
2. Copper and bronze surfaces should then be sanded with 180 - 220 grit paper to cut through to a clean surface and create an adequate surface profile for the primer to bond to.
3. Apply ALEXSEAL® Clear Gloss per TDS recommendations or refer to Premium Topcoat instructions within [“Finishing” starting on page 41](#).



### Tip:

Use the [“Application Record” starting on page 138](#) to document your application process, equipment settings and environmental conditions for future reference. We’d recommend you make photo copies or print copies from the online resources available at [www.alexseal.com](http://www.alexseal.com).

## Additional Notes

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# Topcoat Care & Maintenance

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## Introduction

With proper care and maintenance, ALEXSEAL® Premium Topcoat 501 will withstand the harsh marine environment. After application, it is important to maintain a yacht's exterior surface by keeping it clean and protecting it. Follow these care and maintenance recommendations thoroughly for best results.

## Washing

Rinse down the paint surface with clean fresh water every time the boat is used to remove salt spray and dirt. A water softener may be needed to overcome hard water spots. A buildup of hard water spotting can be confused with premature dulling of paint. A reverse osmosis water supply may also be used to minimize water spotting.

The paint surface should be washed once a week using a mild detergent with a neutral PH formulated specifically for paint finishes. Some detergents will strip waxes & protective sealants off the surface. These should be avoided. Check the detergent label.

DO NOT use abrasive brushes, pads or cleaning agents on paint. These will scratch and dull the finish. Use only soft clean wash mitts and brushes that are specifically designed for washing painted surfaces.

Dry the surface to prevent water spots. Wherever possible, dry the surface with a quality towel, chamois and / or a wiping blade. This will eliminate water spots.

## Sealing and Protecting

It is recommended to apply a high quality wax or polymer sealer designed for surfaces painted with polyurethane at least 2 - 3 times per year. This will act as a sacrificial coating that will protect the paint and can dramatically improve the coatings life expectancy.



### Important:

Many companies manufacture products for sealing and protecting painted surfaces. Only use products that are specifically designed for surfaces painted with polyurethane. These products should not contain abrasives or caustic chemicals.

DO NOT let moisture/water collect or be trapped between a Polyurethane Topcoat and plastic film, shrink wrap, hardware, seat cushions, or wet fabric. Polyurethane topcoats should not be continuously submerged under water. Moisture/water held against a Polyurethane Topcoat even for a few days can result in bubbles forming in the Polyurethane Topcoat.

## Stain Removal

Remove stains from a polyurethane finish as soon as possible. Some stains can actually etch the surface of the paint and embed into the coating. If a stain cannot be removed with a mild detergent during the washing process, solvents may be used to loosen the stain. Always start with mild solvents such as Mineral Spirits, VM & P Naphtha or Denatured Alcohol. Harsher solvents such as Acetone and Lacquer Thinner should only be used as a last resort. After removing the stain with solvent, wash the area with a mild detergent and clean water to remove all solvent residues.

# Topcoat Care & Maintenance

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## Removing Salt Residue

Remove dried salt residue by washing the surface with a warm water and white vinegar solution. Dilute the white vinegar 1 : 1 with warm water and wash the surface. When finished, rewash the surface with a mild detergent and clean water.

## Detailing

Many surfaces on a boat will require minor detailing over time. This might include removing mild overspray and tape lines from repainted areas or polishing an aged surface to temporarily restore the luster. When such areas need detailing as part of the initial application of the coating or periodically over time to repair fine scratches, use a protective wax or polymer sealer to help maintain the gloss in detailed areas. Detailing must be done by an experienced applicator either by hand, or slow speed polishing machine, using an applicator pad recommended by the product's manufacturer.

## Buffing

Occasionally light buffing may be needed to restore the finish. Buffing must be done by an experienced applicator either by hand or slow speed buffing machine using a compound/polish and a pad recommended by the product's manufacturer. Afterwards always use a protective wax or polymer sealer to help maintain the gloss in the buffed areas. Avoid aggressive buffing which could remove excessive coating from the surface and reduce durability of the paint.

## Spot Repairs

Spot repairs must be done by an experienced applicator using a blend area and reducer fog technique. A spot repair is used to repair a small area versus repainting the entire surface. A 1500 - 2000 grit blending area will reduce a halo appearance where the new coating overlaps the old coating. Use the topcoat reducer to spray a light mist or fog on this overspray edge to reduce the texture and aid in blending. Machine buff the blended area to restore the gloss. Any buffing must be done by an experienced applicator by hand or slow speed buffing machine using compound/polish and a pad recommended by the product's manufacturer. Applying a protective wax or polymer sealer in this area will help maintain gloss and reduce the visibility of the repair.



### Note:

Some colors including reds, grays, and metallics may not provide invisible repairs. To avoid color change, testing on a small inconspicuous area is recommended.

## Recommended Products

Listed below are some products designed for cleaning and maintaining painted finishes. Other products may be suitable. Read all labels before using.

### Washing

- 3M Multi-Purpose Boat Soap
- Aquatech 501 Boat Wash Concentrate
- Boat Life Boat Soap
- Liquid Glass® Wash Concentrate
- Meguiar's Flagship Premium Marine Wash
- Sudbury Boat Soap
- Riwx Boatclean RS





## Protective Primer 161

### 1. Introduction

ALEXSEAL® Protective Primer 161 is an epoxy based primer. Due to specific corrosion inhibitors and a combination of epoxy resin binding agents, this primer offers excellent adhesion promotion on all substrates as well as corrosion protection on steel and aluminium substrates.

The long re-coating times of ALEXSEAL® Protective Primer 161 allows an economical application process. After curing, ALEXSEAL® Protective Primer 161 is the ideal adhesion promoter for additional layers of ALEXSEAL® products.

### 2. Range of Application

ALEXSEAL® Protective Primer 161 is used for corrosion protection and adhesion promotion on steel and aluminium substrates, both above and below the waterline.

### 3. Color

Color of mixture:	White / Gray / Yellow
Base material:	White / Gray / Yellow
Converter:	Clear

### 4. Coverage

Volume Solids catalyzed without reduction: 48 %



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base and converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in µm (mils)
<b>Theoretical</b>	4.8	18	196	100 ( 4 )
<b>Practical</b>				
Conventional Air Spray Equipment	2.4	9.2	100	100 ( 4 )
HVLP Air Spray Equipment	2.6	10.2	110	100 ( 4 )
Airless Equipment	2.9	11.2	120	100 ( 4 )
Brush / Roller	3.5	13.2	142	100 ( 4 )

### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

ALEXSEAL® Protective Primer 161 is applied directly to the properly cleaned and prepared substrate (ideally within 6 hours). To achieve optimum adhesion and performance:

### Steel

Should be prepared by sandblasting to near white metal, SA 2.5 (SSPC - SP10 - 85) or ground (36 - 40 grit) - a 2 - 4 mils (50 - 100 micron) profile.

### Aluminium

Should be sandblasted or ground (36 - 60 grit) to bright clean aluminium with a 2 - 4 mils (50 - 100 micron) profile.

ALEXSEAL® Protective Primer 161 may be applied as a tie coat primer before a fairing application over gelcoat and raw resin lay-up. Gelcoat must be sanded with 80 - 100 grit. Fiberglass resin should be ground with 36 - 60 and / or sand blasted. The surface and the bottom of any profile should be dull and abraded with no shiny spots.

### 6. Trade Names

Base Material	P1610	ALEXSEAL® Protective Primer 161 White
	P1613	ALEXSEAL® Protective Primer 161 Gray
	P1615	ALEXSEAL® Protective Primer 161 Yellow
Converter	C1617	ALEXSEAL® Protective Primer 161 Converter
Reducer	R4042	ALEXSEAL® Epoxy Primer Reducer

### 7. Mixing Ratio

6 parts by volume	P.....	ALEXSEAL® Protective Primer 161 Base
1 part by volume	C1617	ALEXSEAL® Protective Primer 161 Converter
5 - 10% reduction (vol.)	R4042	ALEXSEAL® Epoxy Primer Reducer

Allow a 15 minute induction period after mixing base and converter, add reducer and remix.

Example: 6 : 1 : 1/2 = 7 % reduction

The amount of reducer required may vary depending on the application conditions.

### 8. Application

Viscosity	Zahn #2: ≈ 80 sec, DIN 4 cup 4mm: ≈ 70 sec
Nozzle Size Gravity Gun	1.8 - 2.5 mm (0.071 - 0.098) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.60) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.4 - 1.6 mm (0.055 - 0.063) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 22 PSI) - Conventional & HVLP
Airless Equipment	Tip 0.35mm / 60° - 0.43mm / 60° (0.014 / 60° - 0.017 / 60°) Inlet Pressure 2 - 3 bar (29 - 44 PSI)

Apply 1 cross coat or 2 coats to a total wet film thickness (WFT) of 200 - 300 microns (8 - 12 mils). This will achieve a dry film thickness (DFT) of 90 - 135 microns (3 - 5 mils).



## CF Metal Primer 156

### 1. Introduction

ALEXSEAL® CF Metal Primer 156 is a chromate free, high solid epoxy-based primer designed for priming metal surfaces where corrosion protection and chemical resistance is required.

### 2. Range of Application

ALEXSEAL® CF Metal Primer 156 is designed to prime and seal new and old, properly prepared, metal surfaces prior to the application of ALEXSEAL® Topcoats or ALEXSEAL® Finish Primer 442. This product is ideal for masts, parts and thin gauge metal where minimal fairing is required. It may be top coated or primed depending on the application requirements. CF Metal Primer 156 may be used above and below the waterline.

### 3. Color

Colors of mixture:	Ivory
Base material:	Ivory
Converter:	Clear

### 4. Coverage

Coverage for ALEXSEAL® CF Metal Primer 156 when applying 1 - 2 coats or passes in the same application period.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in μm (mils)
<b>Theoretical/ Brush and Roller</b>	22	83.3	876	25 ( 1 )
<b>Practical</b>				
Conventional Air Spray Equipment	7.3	27.6	297	25 ( 1 )
HVLP Air Spray Equipment	8.5	32	346	25 ( 1 )
Airless Spray Equipment	10	37.8	407	25 ( 1 )

Volume Solids catalyzed without reduction: 60%.

### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

ALEXSEAL® CF Metal Primer 156 may be applied directly to the properly cleaned and prepared Aluminium or Steel substrate to achieve optimum adhesion and performance:

### Aluminium

Should be sanded with 80 - 180 grit or blasted depending on thickness of primer surfacer - or topcoat used over CF Metal Primer 156. 180 - 220 grit can be used to sand the metal when over coating CF Metal Primer 156 directly with ALEXSEAL® Topcoat 501. Bright clean aluminium should always be achieved before application. The use of either Alumiprep® by itself or Alumiprep® and Alodine® treatment is recommended to clean and treat the aluminium to enhance corrosion resistance.

Please contact your ALEXSEAL® Representative to discuss additional chemical treatment options.

### 6. Trade Names

Base Material	P1566	ALEXSEAL® CF Metal Primer 156 Ivory
Converter	C1567	ALEXSEAL® CF Metal Primer 156 Converter
Reducer	R4042	ALEXSEAL® Epoxy Primer Reducer

### 7. Mixing Ratio

2 parts by volume	P1566	ALEXSEAL® CF Metal Primer 156 Base
1 part by volume	C1567	ALEXSEAL® CF Metal Primer 156 Converter
10 – 20% by volume	R4042	ALEXSEAL® Epoxy Primer Reducer

Allow a 15 minute induction period after mixing base and converter, add reducer and remix.

Example: 2 : 1 : 3/10 = 10% reduction for spray application

The amount of reducer varies on the application conditions.

### 8. Application

Viscosity	Zahn #2: ≈ 15 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.040 - 0.055) - Conventional & HVLP
Nozzle Size Siphon Cup	1.4 - 1.6 mm (0.061 - 0.070) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.2 mm (0.040 - 0.046) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 15 PSI) - Conventional & HVLP

### Spray

Apply 1 coat to a wet film thickness (WFT) of 1.5 - 2 mils (40-50 microns). This will achieve a dry film thickness (DFT) of 1 mil (20-25 microns). Minimum recommended film is 1 mil (25 microns) DFT. Maximum recommended film thickness during a spray application is 2 coats totaling 2 - 3 mils (50-60 microns) WFT, or 1 mil (25-30 microns) DFT.



## Cor Spec Primer 135

### 1. Introduction

ALEXSEAL® Cor Spec Primer 135 is a chromate containing, two component epoxy primer for use on metal substrates. This product is highly resistant to corrosion and chemicals.

### 2. Range of Application

ALEXSEAL® Cor Spec Primer 135 is designed to prime and seal old and new, properly prepared, metal surfaces prior to the application of ALEXSEAL® Topcoats or ALEXSEAL® Finish and Surfacing Primers. This product is ideal for masts, parts and metal substrates. It may be top coated directly or primed depending on the application requirements. Cor Spec Primer 135 may be used above and below the waterline.

### 3. Color

Colors of mixture: Yellow Green

### 4. Coverage

Coverage for ALEXSEAL® Cor Spec Primer 135 when applying 1 coat or pass in the same application period.

Volume Solids catalyzed without reduction: 30 %.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in µm (mils)
<b>Theoretical</b>	22	83	893	25 ( 1 )
<b>Practical</b>				
Conventional Air Spray Equipment	7	27	290	25 ( 1 )
HVLP Air Spray Equipment	8	31	333	25 ( 1 )
Brush / Roller and Airless Spray Equipment	22	83	893	25 ( 1 )

### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

ALEXSEAL® Cor Spec Primer 135 may be applied directly to the properly cleaned and prepared Aluminum or Steel substrate.

To achieve optimum adhesion and performance:

#### Steel

Should be prepared by sandblasting to near white metal, Sa2.5 (SSPC – SP10 - 85) or ground 36 - 60 grit to a 50 - 100 micron (2 - 4 mils) profile.

#### Aluminium

For application of a topcoat over Cor Spec Primer 135 the surface should be sanded with 180-220 grit.

For application of a finish primer or high build surfacer over Cor Spec Primer 135 the surface should be sanded with 80-180 grit or grit blasted.

For application of a fairing system over Cor Spec Primer 135 the surface should be grit blasted or ground with (36 - 60 grit) to bright clean aluminium with a 2 - 4 mils (50 - 100 micron) profile.

Bright clean aluminium should always be achieved before application. The use of Alumiprep® or Alumiprep® and Alodine® treatment may be used as an option to clean and treat the aluminium. Please contact your ALEXSEAL® Representative to discuss additional chemical treatment options.

### 6. Trade Names

Base Material	P1352	ALEXSEAL® Cor Spec Primer 135 Yellow
Converter	C1357	ALEXSEAL® Cor Spec Primer 135 Converter

### 7. Mixing Ratio

3 parts by volume	P1352	ALEXSEAL® Cor Spec Primer 135 Base
1 part by volume	C1357	ALEXSEAL® Cor Spec Primer 135 Converter

Allow a 15 minute induction period after mixing base and converter

Example: 3 : 1

No reduction necessary.

### 8. Application

Viscosity	Zahn #2: ≈ 15 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.039 - 0.055) - Conventional & HVLP
Fluid Nozzle Size Siphon Cup	1.4 - 1.6mm (0.061 - 0.070) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	0.8 - 1.2 mm (0.032 - 0.046) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI)
Pot Pressure	0.7 - 1.5 bar (10 - 15 PSI) - Conventional & HVLP



## Wash Primer 133

### 1. Introduction

ALEXSEAL® Wash Primer 133 is a vinyl based zinc chromate two component primer used to inhibit corrosion and promote adhesion to metal substrates including anodized aluminum, stainless steel, and de-oiled washed galvanized steel.

### 2. Range of Application

ALEXSEAL® Wash Primer 133 is designed to prime and seal old and new, properly prepared, metal surfaces prior to the application of ALEXSEAL® topcoats or ALEXSEAL® finish primers. This product is ideal for masts, parts and thin gauge metal where minimal fairing is required. It may be top coated or primed depending on the application requirements. Wash Primer 133 may be used above and below the waterline.

### 3. Color

Colors of mixture:	Yellow Green
Base material:	Yellow Green
Converter:	Clear

### 4. Coverage

Volume Solids catalyzed without reduction: 12 %



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	Rec. DFT in μm (mils)
<b>Theoretical</b>	15	57	633	8 (0.3)
<b>Practical</b>				
Conventional Air Spray Equipment	7.5	28.6	308	8 (0.3)
HVLP Air Spray Equipment	8.6	33	354	8 (0.3)
Brush / Roller and Airmix Equipment	12.9	50	530	8 (0.3)

### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

ALEXSEAL® Wash Primer 133 may be applied directly to the properly cleaned and prepared Aluminum or Steel substrate.

To achieve optimum adhesion and performance:

### Steel

Should be prepared by sandblasting to near white metal, Sa2.5 (SSPC – SP10 - 85) or ground 36 - 60 grit to a 50 - 100 micron (2 - 4 mils) profile.

### Aluminium

For application of a topcoat over Cor Spec Primer 135 the surface should be sanded with 180-220 grit.

When applying topcoat over Wash Primer 133 the surface should be sanded with 180-220 grit.

When applying Finish Primer 442 over Wash Primer 133 the surface should be sanded with 80-180 grit or grit blasted.

Alumiprep® may be used to clean the surface prior to applying Wash Primer 133



#### Important:

DO NOT use Alodine® treatment under Wash Primer 133 (instead of 133 use 135, 156 or 161 primers).

Contact your Alexseal® Representative to discuss chemical treatment options to clean the metal substrate before application of Wash Primer 133.

### 6. Trade Names

Base Material	P1331	ALEXSEAL® Wash Primer, Yellow
Converter	C1334	ALEXSEAL® Wash Primer Converter
Reducer	R1338	ALEXSEAL® Wash Primer Reducer

### 7. Mixing Ratio

4 parts by volume	P1331	ALEXSEAL® Wash Primer Base
1 part by volume	C1334	ALEXSEAL® Wash Primer Converter
2 parts by volume	R1338	ALEXSEAL® Wash Primer Reducer

Reduction: 4 : 1 : 2 = 50% (spray application)

Wait 15 minutes after mixing base and converter before adding the reducer



#### Note:

It is necessary to use R1338 reducer in this product at the mix ratio indicated above



## Fairing Compound 202

### 1. Introduction

ALEXSEAL® Fairing Compound 202 is a solvent-free, epoxy-based, light-weight filler, which provides the ideal product for yachts that require filling and fairing. ALEXSEAL® Fairing Compound 202 has excellent application, sanding and anti-sagging properties. It is designed to be easy to mix and apply, while the cured film provides an excellent surface for re-coating with other ALEXSEAL® Yacht Coating products.

### 2. Range of Application

ALEXSEAL® Fairing Compound 202 is used for fairing all appropriately prepared surfaces and can be used for surfaces above and below the waterline. If ALEXSEAL® Fairing Compound 202 is used below the waterline it must be sealed with ALEXSEAL® Finish Primer 442.

### 3. Color

Color of mixture:	Gray
Base material:	White
Thick Base:	White
Standard Converter:	Gray
Fast Converter:	Red

### 4. Coverage

Coverage for ALEXSEAL® Fairing Compound 202 will be based on the depth of filling required as well as the size of the surface to be faired. Volume Solids catalyzed without reduction: 100 %



#### Note:

Coverage rates are figured for base and converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in μm (mils)
<b>Theoretical</b>	1	3.8	41	100 ( 40 )
<b>Practical</b>	0.15	0.6	6.4	6 mm ( 1/4" )

### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

To ensure optimum adhesion, the substrate must be ground and/or blasted with (36 - 60 grit) before priming to ensure system adhesion. Full fairing systems require a heavily abraded substrate. Thin fairing systems of less than 3 mm ( - 0.012 inch) will require a less aggressive profile to anchor the system.

### Metal Substrates

Optimum mechanical and corrosion resistance values are achieved by proper surface preparation and substrate priming with ALEXSEAL® Protective Primer 161. ALEXSEAL® Fairing Compound 202 may be applied directly to ALEXSEAL® Protective Primer 161 without sanding for up to 6 months.

### GRP Substrates

Use ALEXSEAL® Super Build 302, Finish Primer 442 or Protective Primer 161 over a properly prepared surface. All ALEXSEAL® Primers (except 161, see the 161 TDS overcoat chart) should be sanded with 60 - 80 grit, after over night dry, before application of ALEXSEAL® Fairing Compound 202.

For custom applications over substrates including epoxy resins, contact your ALEXSEAL® representative.

### 6. Trade Names

Standard Base	P2094	ALEXSEAL® Fairing Compound 202 Standard Base
Thick Base	P2083	ALEXSEAL® Fairing Compound 202 Thick Base
Standard Converter	C2075	ALEXSEAL® Fairing Compound 202 Std. Converter
Fast Converter	C2017	ALEXSEAL® Fairing Compound 202 Fast Converter

### 7. Mixing Ratio

By volume	1:1 (Standard Base/Thick Base : Standard Converter/Fast Converter)
By weight	10:6 (Standard Base/Thick Base : Standard Converter/Fast Converter/LV)



#### Important:

ALEXSEAL® Fairing Compound 202 must not be reduced.

### 8. Application

#### Application Equipment

Trowels, spatulas, straight edge materials

The components of ALEXSEAL® Fairing Compound 202 have different colors to control the mixing process. After mixing, the color of the fillers should be a homogeneous color. If the base and converter are not mixed thoroughly, it could result in an improperly cured batch. Mixing can be done mechanically with slow turning dough mixers or manually. Do not use drill mixers. The mixing in of air bubbles should be avoided.

The material can be easily applied by spatula or trowel; inclusion of air pockets should be avoided. Applying the product to the surface in thin layers and working up to the desired thickness before pulling the product out with a straight edge, will help avoid creating air pockets in the applied product.



## Spray Fair 328

### 1. Introduction

ALEXSEAL® Spray Fair 328 is an epoxy-based, sprayable filler surfacer, which provides the ideal product for yachts that require filling and fairing.

ALEXSEAL® Spray Fair 328 has excellent application, sanding and anti-sagging properties. It is designed to be easy to mix and apply, while the cured film provides an excellent surface for re-coating with other ALEXSEAL® products.

### 2. Range of Application

ALEXSEAL® Spray Fair 328 is used for fairing all appropriately prepared surfaces and can be used for surfaces above the waterline only.

### 3. Color

Color of mixture:	Tan
Base material:	Tan
Converter:	Yellow

### 4. Coverage

Volume Solids catalyzed without reduction: 71 % Coverage figured for base and converter.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in μm (mils)
<b>Theoretical</b>	0.6	2.1	23	900 ( 36 )
<b>Practical</b>				
Conventional Air Spray Equipment	0.5	2.0	22	900 ( 36 )
HVLP Air Spray Equipment	0.6	2.4	26	900 ( 36 )
Airless Equipment	0.7	2.8	30	900 ( 36 )

### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

To ensure optimum adhesion, the substrate must be ground and/or blasted with (36 - 60 grit) before priming to ensure system adhesion. Full fairing systems require a heavily abraded substrate. Thin fairing systems of less than 3 mm ( - 0.012 inch) will require a less aggressive profile to anchor the system. Priming is required on most substrates before application of ALEXSEAL® Spray Fair 328.

For metal substrates - optimum mechanical and corrosion resistance values are achieved by proper surface preparation and substrate priming with an ALEXSEAL® Metal Primer.

For GRP substrate, use ALEXSEAL® Finish Primer 442 or Super Build 302. The ALEXSEAL® Primer should be sanded with 60 - 80 grit, after overnight dry, before application of ALEXSEAL® Spray Fair 328.

For custom applications over substrates including epoxy resins, contact your ALEXSEAL® representative.

### 6. Trade Names

Base Material	P3280	ALEXSEAL® Spray Fair 328
Converter	C3287	ALEXSEAL® Spray Fair 328 Converter
Reducer	R3040	ALEXSEAL® High Build Epoxy Reducer

### 7. Mixing Ratio

1 part by volume	P3280	ALEXSEAL® Spray Fair 328
1 part by volume	C3287	ALEXSEAL® Spray Fair 328 Converter
10 - 25 % reduction (vol.)	R3040	ALEXSEAL® High Build Epoxy Reducer

Example: 1 : 1 : ¼ = 12.5% reduction

Example: 1 : 1 : ½ = 25% reduction

Allow a 15 minute induction period after mixing base and converter, add reducer and remix.

The amount of reducer required may vary depending on the application conditions.

### 8. Application



#### Note:

Thick viscosity requires the use of a large nozzle and a pressure pot.

Fluid Nozzle Size Pressure Pot	2.2 - 2.8 mm (0.08 - 0.110 inch) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (44 - 73 PSI) - Conventional & HVLP
Pot Pressure	1 - 1.5 bar (15 - 22 PSI) - Conventional & HVLP
Airless Equipment	Tip 0.50mm / 60° - 0.60mm / 60° (0.020 / 60° - 0.024 / 60°)
Inlet Pressure	3 - 5 bar (44 - 70 PSI)

The components of ALEXSEAL® Spray Fair 328 have different colors to ensure thorough mixing. After mixing, the color of the material should be a homogeneous tan color. If they are not mixed thoroughly, it could result in an improperly cured batch. Mixing can be done mechanically with a slow turning dough mixer or manually. The mixing in of air bubbles should be avoided.



### Fine Filler 303

ALEXSEAL® Fine Filler 303 is a solvent-free, epoxy-based filler which cures without shrinking into a water resistant solid coating. This is an ideal product to use between ALEXSEAL® Fairing Compound 202 and ALEXSEAL® Super Build 302 or ALEXSEAL® Finish Primer 442.

ALEXSEAL® Fine Filler 303 is fast drying and has excellent sanding characteristics.

The cured film offers superior mechanical resistance values.

#### 2. Range of Application

ALEXSEAL® Fine Filler 303 is used to even out imperfections on appropriately prepared surfaces and can be used for surfaces above and below the waterline. If ALEXSEAL® Fine Filler 303 is used below the waterline it must be sealed with ALEXSEAL® Super Build 302 and ALEXSEAL® Finish Primer 442.

Color of mixture:	Sand
Base material:	Light Gray
Converter:	Beige

#### 4. Coverage

Coverage for ALEXSEAL® Fine Filler 303 will be based on the depth of filling required as well as the size of the surface to be faired.



#### Note:

Coverage rates are figured for base and converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in µm (mils)
<b>Theoretical</b>	1	3.8	41	1000 ( 40 )
<b>Practical</b>	1	3.8	41	1000 ( 40 )

Volume Solids mixed material: 100 %

#### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

ALEXSEAL® Fine Filler 303 may be applied as a high film surfacer over ALEXSEAL® primers and fillers or gelcoat and raw resin lay-up. The surface must be sanded with 80 - 150 grit. Fiberglass resin should be ground with 36 - 60 grit and / or sand blasted. The surface and the bottom of any fiberglass profile should be dull and abraded with no shiny spots.

ALEXSEAL® Fine Filler 303 should be sealed with ALEXSEAL® Super Build 302 and ALEXSEAL® Finish Primer 442 prior to topcoating.

Optimum mechanical resistance values are achieved by proper surface preparation.

#### 6. Trade Names

Base Material	P3033	ALEXSEAL® Fine Filler 303
Converter	C3034	ALEXSEAL® Fine Filler 303 Converter

#### 7. Mixing Ratio

2 parts by volume	P3033	ALEXSEAL® Fine Filler 303
1 part by volume	C3034	ALEXSEAL® Fine Filler 303 Converter

**ALEXSEAL® Fine Filler 303 must not be reduced.**

#### 8. Application

##### Application Equipment

Trowels, spatulas, straight edge materials

The components of ALEXSEAL® Fine Filler 303 have different colors to control the mixing process. After mixing, the color of the fillers should be a homogeneous color. If the base and converter are not mixed thoroughly, it could result in an improperly cured batch. Mixing can be done mechanically with slow turning dough mixers or manually. Do not use drill mixers. The mixing in of air bubbles should be avoided.

The material can be easily applied by spatula or trowel; inclusion of air pockets should be avoided. Applying the product to the surface in thin layers and working up to the desired thickness before pulling the product out with a straight edge will help avoid creating air pockets in the applied product.

For equipment cleaning use R4042 ALEXSEAL® Epoxy Primer Reducer. ALEXSEAL® Fine Filler 303 should be block sanded with 100 - 150 grit. Block sanding with 150 grit or finer will help prevent sand scratch print through in the finished system.

#### 9. Pot Life and Drying

Temperature for minimum time	15°C (60°F)	20°C (68°F)	25°C (77°F)	30°C (85°F)	Max Time
Pot Life – approx.	2 hrs	90 min	45 min	30 min	N/A
Dry to sand	48 hrs	24 hrs	18 hrs	12 hrs	N/A
Tape Dry	48 hrs	24 hrs	18 hrs	12 hrs	N/A
Fully Cured	9 days	7 days	5 days	3 ½ days	N/A



#### Note:

The above chart reflects approximate minimum and maximum time. Surface temperature, air flow, direct or non-direct sunlight 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).

The minimum application condition should be 3°C (5.4°F) above dew point.



## Super Build 302

### 1. Introduction

ALEXSEAL® Super Build 302 is an epoxy-based high build primer / surfacer which cures into a smooth easy to sand, water resistant coating. ALEXSEAL® Super Build 302 has excellent spray characteristics and is fast drying to allow maximum efficiency while fairing. The cured film offers excellent mechanical resistance values.

### 2. Range of Application

ALEXSEAL® Super Build 302 is used to seal ALEXSEAL® Fairing Compound 202 and to even out imperfections remaining after the filling and sanding process. It also is designed to be used as a smooth, non-porous surfacer prior to the application of ALEXSEAL® Finish Primer 442.

### 3. Color

Color of mixture:	Off White
Base material:	White
Converter:	Gray

### 4. Coverage

Volume Solids catalyzed without reduction: 60 %.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in µm (mils)
<b>Theoretical</b>	2	7.6	81	500 ( 20 )
<b>Practical</b>				
Conventional Air Spray Equipment	1.2	4.6	50	500 ( 20 )
HVLP Air Spray Equipment	1.5	5.8	63	500 ( 20 )
Airless Equipment	2.0	7.6	81	500 ( 20 )
Brush / Roller	0.9	3.3	36	500 ( 20 )

### 5. Substrate Treatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

ALEXSEAL® Super Build 302 may be applied over sanded fillers such as ALEXSEAL® Fairing Compound 202. After finish sanding the ALEXSEAL® Fairing Compound 202 with 60 to 150 grit, the surface must be cleaned and dusted off thoroughly before applying ALEXSEAL® Super Build 302.

ALEXSEAL® Super Build 302 may be applied as a high build surfacer over gelcoat and raw resin lay-up. Gelcoat must be sanded with 80 - 150 grit. Fiberglass resin should be ground with 36 - 60 and / or sand blasted. The surface and the bottom of any profile should be dull and abraded, with no shiny spots.



#### Tip:

**Refit and Repair:** Old coatings must have good adhesion and chemical resistance and must be sanded with 100 - 150 grit. A compatibility test should be performed if the old coating is questionable.

ALEXSEAL® Super Build 302 should be sealed with ALEXSEAL® Finish Primer 442 prior to topcoating.

### 6. Trade Names

Base Material	P3002	ALEXSEAL® Super Build 302
Converter	C3052	ALEXSEAL® Super Build 302 Converter
Reducer	R3040	ALEXSEAL® High Build Epoxy Reducer
Accelerator	A4030	ALEXSEAL® Accelerator for Super Build 302

### 7. Mixing ratio

1 part by volume	P3002	ALEXSEAL® Super Build 302
1 part by volume	C3052	ALEXSEAL® Super Build 302 Converter
10 to 25 % reduction (vol.)	R3040	ALEXSEAL® High Build Epoxy Reducer

Allow a 15 minute induction period after mixing base and converter, add reducer and remix

Example: 1 : 1 : 1/2 = 25 % reduction for conventional spray application  
 Example: 1 : 1 : 1/4 = 12.5 % reduction for airless spray application

The amount of reducer required may vary depending on the application conditions.

### 8. Application

Viscosity	Zahn #2: ≈ 24 sec, DIN 4 cup 4mm: ≈ 20 sec
Nozzle Size Gravity Gun	2.0 mm (0.079) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.2 - 1.6 mm (0.046 - 0.060) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 22 PSI) - Conventional & HVLP
Airless Equipment	Tip 0.43 mm / 60° (0.017 / 60°) Inlet Pressure 3 - 5 bar (44 - 70 PSI)



## Finish Primer 442

### 1. Introduction

ALEXSEAL® Finish Primer 442 is an epoxy-based finish primer offering advanced adhesion qualities over various substrates, exceptional sanding characteristics, and good film build.

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®

### 2. Range of Application

ALEXSEAL® Finish Primer 442 is designed to prime and seal old and new, properly prepared, stable surfaces such as gelcoat and fiberglass, as well as to seal other Alexseal® primers and filler systems. Using this primer as a base enhances the "Wet Look" of ALEXSEAL®'s Topcoats. Finish Primer 442 may be used above and below the waterline.

### 3. Color

Colors of mixture:	White / Gray
Base material:	White / Gray
Converter:	Clear

### 4. Coverage

Volume Solids catalyzed without reduction: 39 %.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in µm (mils)
<b>Theoretical</b>	6.2	23.5	253	75 - 100 (3 - 4)
<b>Practical</b>				
Conventional Air Spray Equipment	2.9	11.2	120	75 - 100 (3 - 4)
HVLP Air Spray Equipment	3.3	12.5	134	75 - 100 (3 - 4)
Brush / Roller	5.5	20.9	225	75 - 100 (3 - 4)

### 5. Substrate Pretreatment

The substrate must be clean, dry and free from dust, grease, oil and other contamination.

Fiberglass and gelcoat should be coated directly with ALEXSEAL® Finish Primer 442 after sanding with 100 - 150 grit.

Refit and repair: Old coatings must have good adhesion and chemical resistance and must be sanded with 100 - 150 grit. A compatibility test should be performed if the old coating is questionable.

Steel and Aluminum should initially be coated with an ALEXSEAL® Metal Primer.

Fairing Systems: ALEXSEAL® Finish Primer 442 should be applied over ALEXSEAL® Super Build 302 after block sanding with 100 - 150 grit.

### 6. Trade Names

Base Material	P4420	ALEXSEAL® Finish Primer 442 White
	P4423	ALEXSEAL® Finish Primer 442 Gray
Converter	C4427	ALEXSEAL® Finish Primer 442 Converter
Reducer	R4042	ALEXSEAL® Epoxy Primer Reducer
Accelerator	A4429	ALEXSEAL® Accelerator Finish Primer 442

### 7. Mixing Ratio

#### Spray

1 part by volume	P.....	ALEXSEAL® Finish Primer 442 Base
1 part by volume	C4427	ALEXSEAL® Finish Primer 442 Converter
5 to 25 % reduction (vol.)	R4042	ALEXSEAL® Epoxy Primer Reducer

Example: 1 : 1 : 1/4 = 12.5 % reduction for spray application

The amount of reducer required may vary depending on the application conditions. Allow a 15 minute induction period after mixing base and converter, add reducer and remix. 442 may be reduced up to 25% for thin smooth applications such as use as a sealer where surfacing build is not as necessary. R5015 ALEXSEAL® Topcoat Reducer Brush may be used for Brush or Hot Temp application.

### 8. Application

Viscosity	Zahn #2: ≈ 25 sec, DIN 4 cup 4mm: ≈ 21 sec
Nozzle Size Gravity Gun	1.4 - 1.8 mm (0.055 - 0.071) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.2 - 1.6 mm (0.046 - 0.060) - Conventional & HVLP
Atomizing Pressure	2.0 - 4.0 bar (30 - 60 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 22 PSI) - Conventional & HVLP



## Premium Topcoat 501

### 1. Introduction

ALEXSEAL® Premium Topcoat 501 is a two component, polyurethane-based coating, designed for exterior and interior applications. ALEXSEAL® Premium Topcoat 501 has a high gloss wet look which provides superior distinction of image. This product has been specifically developed for the yacht industry.

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® Premium Topcoat 501 offers excellent gloss and color stability values, even under extreme climatic conditions. Additionally the material is highly resistant to UV rays, salt water, abrasion and fuel.

### 2. Range of Application

ALEXSEAL® Premium Topcoat 501 is used as a extreme high-gloss topcoat in spray or brush applications. It can be used internally or externally in areas not subject to permanent water immersion.

### 3. Color

ALEXSEAL® Premium Topcoat 501 is available in standard factory packaged colors and, upon request, in custom colors. Refer to the color card or product overview for part numbers.

### 4. Coverage

Volume Solids catalyzed without reduction: whites 42 %, colors 38 %.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in μm (mils)
<b>Theoretical</b> / Brush and Rolling	6	22.7	244	75 ( 3 )
<b>Practical</b>				
Conventional Air Spray Equipment	3.6	13.6	146	75 ( 3 )
HVLP Air Spray Equipment	4.5	17	183	75 ( 3 )

### 5. Substrate Pretreatment

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 is recommended. Final sanding of ALEXSEAL® Finish Primer 442 should be smooth sanded with 320 grit sand paper.

It is recommended that the ALEXSEAL® Topcoat should be applied within 4 days, 2 days if outside after sanding to ensure adhesion.

## 6. Trade Names

Base Material	T....	ALEXSEAL® Premium Topcoat 501 (Base Color)
Converter Spray	C5051	ALEXSEAL® Topcoat Converter Spray
Converter Brush	C5012	ALEXSEAL® Topcoat Converter Brush
Reducer Superfast	R5090	ALEXSEAL® Topcoat Reducer Superfast (spray)
Reducer Fast	R5070	ALEXSEAL® Topcoat Reducer Fast (spray)
Reducer Med	R5050	ALEXSEAL® Topcoat Reducer Medium (spray)
Reducer Slow	R5030	ALEXSEAL® Topcoat Reducer Slow (spray)
Reducer Brush	R5015	ALEXSEAL® Topcoat Reducer Brush
Accelerator	A5035	ALEXSEAL® Topcoat 501 Accelerator

## 7. Mixing Ratio

### Spray

1 part by volume	T....	ALEXSEAL® Premium Topcoat 501 (Base Color)
1 part by volume	C5051	ALEXSEAL® Topcoat Converter Spray
30 - 37 % by volume	R....	ALEXSEAL® Topcoat Reducer (choose from list above)

Example: 1 : 1 : 3/4 = 37 % reduction

### Brush and Rolling

2 parts by volume	T....	ALEXSEAL® Premium Topcoat 501 (Base Color)
1 part by volume	C5012	ALEXSEAL® Topcoat Converter Brush
16 - 33 % by volume	R5015	ALEXSEAL® Topcoat Reducer Brush

Example: 2 : 1 : 1/2 up to 1 = 16.5 up to 33 % reduction

The amount of reducer required may vary depending on the application conditions.

Mixed material must be filtered before application.

## 8. Application

Viscosity	Zahn #2: ≈ 15 - 18 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.040 - 0.050) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP
Airmix Equipment	0.18 - 0.23 mm (0.007 - 0.009)
Inlet pressure	3.0 - 5.0 bar (42 - 70 PSI)



## Non Skid

### 1. Introduction

ALEXSEAL® Non Skid is specifically developed to achieve non-skid textures.

### 2. Range of Application

Surfaces where anti-skid properties are required.

### 3. Color

Transparent

### 4. Coverage

Same as ALEXSEAL® Premium Topcoat 501, see TDS T series for details.

### 5. Substrate Pre-treatment

Same as ALEXSEAL® Premium Topcoat 501, see TDS T series for details.

### 6. Trade Names

Non Skid Fine	A5003	ALEXSEAL® Non Skid Fine
Non Skid Coarse	A5007	ALEXSEAL® Non Skid Coarse

### 7. Mixing Ratio

#### Spray

1 part by volume	T....	ALEXSEAL® Premium Topcoat 501 (Base Color)
1 part by volume	C5051	ALEXSEAL® Topcoat Converter Spray
12 to 20 % by volume	R....	ALEXSEAL® Topcoat Reducer (choose from list)

Example: 1 : 1 : 1/4 = 12.5 % reduction

#### Brush and Rolling

2 parts by volume	T....	ALEXSEAL® Premium Topcoat 501 (Base Color)
1 part by volume	C5012	ALEXSEAL® Topcoat Converter Brush
16 % by volume	R5015	ALEXSEAL® Topcoat Reducer Brush

Example: 2 : 1 : 1/2 = 16 % reduction

The texture of the non skid finish can be varied by mixing ALEXSEAL® Non Skid Fine and ALEXSEAL® Non Skid Coarse. To receive an optimal effect, testing on a small area is recommended.

Example for a medium grade of non-skid

1 Part ALEXSEAL® Non Skid Coarse + 1 Part ALEXSEAL® Non Skid Fine

#### Spray

For 1 gallon of mixed topcoat add 1 - 11/2 quart ALEXSEAL® Non Skid

### Brush and Rolling

For 1 gallon of mixed topcoat add 0.8 - 1 quart ALEXSEAL® Non Skid

### Sprinkling

As desired ALEXSEAL® Non Skid

### 8. Application

see Technical Data Sheet for ALEXSEAL® Premium Topcoat 501

#### Application by Spraying

Add ALEXSEAL® Non Skid to the mixed topcoat and apply by cross coat spraying. (Fluid Nozzle Size of 1.5 - 1.8 mm, 0.059 to 0.07)

#### Application by Brush/Rolling

Add ALEXSEAL® Non Skid to the mixed topcoat and apply by brush or rolling.

### Sprinkling

Apply the mixed topcoat to the designated area by brush or roller. ALEXSEAL® Non Skid can be sprinkled on the paint film. Allow to dry firmly into the topcoat, Apply additional coats of topcoat ALEXSEAL® Premium Topcoat 501. Some applications may require two finish coats.

### 9. Pot Life and Drying

See Technical Data Sheet for ALEXSEAL® Premium Topcoat 501

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

### 10. Packaging

A5003	ALEXSEAL® Non Skid Fine	1/2 Gal (1.98 lb.)
A5007	ALEXSEAL® Non Skid Coarse	1/2 Gal (1.98 lb.)

### Additional Notes

## Flattening Additive for Polyurethane Topcoats

### 1. Introduction

ALEXSEAL® Flattening Additive is a matting paste for ALEXSEAL® Premium Topcoat 501. This product varies the degree of gloss without reducing the mechanical properties of the topcoat. ALEXSEAL® Flattening Additive is ideal to use when a lower gloss level is desired to minimize glare and surface defects.

### 2. Range of Application

ALEXSEAL® Flattening Additive may be added to any ALEXSEAL® Premium Topcoat 501 color base. This product is designed for spray application. Brush application may result in an uneven flat or semi gloss finish.

### 3. Color

Off White paste which turns to the color choice of Premium 501 Topcoat Base when mixed.

### 4. Coverage

Same as ALEXSEAL® Premium Topcoat 501, see TDS T series for details.

### 5. Substrate Pre-treatment

Same as for ALEXSEAL® Premium Topcoat 501, see TDS T series for details.

### 6. Trade Name

ALEXSEAL® Flattening Additive

### 7. Mixing Ratio

ALEXSEAL® Flattening Additive varies the degree of gloss. For optimum results a trial application is recommend on a small area beforehand.

Thoroughly mix ALEXSEAL® Premium Topcoat 501 with ALEXSEAL® Flattening Additive until one homogeneous mixture is achieved. Add the appropriate quantity of ALEXSEAL® Topcoat Converter and mix thoroughly. Add the appropriate ALEXSEAL® Topcoat Reducer and mix thoroughly. Strain the mixture through multiple paint strainers, maximum 50 – 100 microns (3 - 5 mils, 170 - 325 mesh) before application.

#### Matte Finish Spray

1 part by volume	T...	ALEXSEAL® Premium Topcoat 501 (Base Color)
1 part by volume	A5023	ALEXSEAL® Flattening Additive
1 part by volume	C5051	ALEXSEAL® Topcoat Converter Spray
½ part by volume 16 % (vol)	R...	ALEXSEAL® Topcoat Reducer (Choose from list)

Example: 1 : 1 : 1 : ½ = 16 % reduction

#### Eggshell Finish Spray

1 part by volume	T...	ALEXSEAL® Premium Topcoat 501 (Base Color)
¾ part by volume	A5023	ALEXSEAL® Flattening Additive
1 part by volume	C5051	ALEXSEAL® Topcoat Converter Spray
½ part by volume 10 % (vol)	R...	ALEXSEAL® Topcoat Reducer (Choose from list)

Example: 1 : ¾ : 1 : ½ = 10 % reduction

#### Semi Gloss Finish Spray

1 part by volume	T...	ALEXSEAL® Premium Topcoat 501 (Base Color)
½ part by volume	A5023	ALEXSEAL® Flattening Additive
1 part by volume	C5051	ALEXSEAL® Topcoat Converter Spray
½ part by volume 20 % (vol)	R...	ALEXSEAL® Topcoat Reducer (Choose from list)

Example: 1 : ½ : 1 : ½ = 20 % reduction



#### Notes:

When using non-skid, add non-skid after straining.

Flattening additive may be used in ALEXSEAL® Premium Topcoat 501 Clear Gloss but clouding may occur during some applications. Test trials should be done to determine if the results meet expectations.

Application and mixture including reduction, acceleration, film thickness, application technique, and environmental conditions can effect finish outcome and gloss level. When doing multiple applications for the same project, a consistent process is recommended.

Matte finishes may be more difficult to clean than glossy finishes.

Mixed material must be filtered before application.

### 8. Application

Viscosity	Zahn #2: ≈ 15 - 18 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.040 - 0.050) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP
Airless Equipment	0.18 - 0.28 mm (0.007 - 0.011) Inlet pressure 3.0 - 5.0 bar (42 - 70 PSI)



## Metallic Base Coat

### 1. Introduction

ALEXSEAL® Metallic Base Coat has been designed specifically to withstand the harsh marine environment. It is formulated with a two-component basecoat that provides superior inter-coat adhesion and reduces the possibility of mottling or unevenness in the finish. In addition a two-component aliphatic polyester polyurethane is used for the final clear finish. This gives the ALEXSEAL® Metallic System unsurpassed scratch and stain resistance while preventing discoloration of the clear coat.

### 2. Range of Application

ALEXSEAL® Metallic Base Coat is intended to be part of a base coat/clear coat finish combined with ALEXSEAL® Premium Topcoat 501, T0125 Clear Gloss for the application of a metallic finish. It 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

Coverage for ALEXSEAL® Metallic Base Coat when applying 2 cross coats or passes in the same application period is as follows:



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in μm (mils)
<b>Theoretical</b> / Brush and Rolling	10.5	40	428	25 ( 1 )
<b>Practical</b>				
Conventional Air Spray Equipment	2.45	9.29	100	25 ( 1 )
HVLP Air Spray Equipment	4.41	16.72	180	25 ( 1 )

Volume Solids without reduction: 30 - 45% (depending on color)

Coverage for ALEXSEAL® T0125 Clear Gloss can be found in the ALEXSEAL® Premium Topcoat 501 Clear Gloss Technical Data Sheet.

### 5. Substrate Pretreatment

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 320 - 400 grit sand paper.

## 6. Trade Names

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

## 7. Mixing Ratio

### Compressed air spraying

5 parts by volume	M....	ALEXSEAL® Metallic Base Coat
1 part by volume	C5051	ALEXSEAL® Topcoat Converter Spray
50 % by volume		ALEXSEAL® Topcoat Reducer (see above)

Example: 5 : 1 : 3 = 50% reduction

### First Clear Application

1 part by volume	T0125	ALEXSEAL® Premium Topcoat 501 Clear
1 part by volume	C5051	ALEXSEAL® Premium Topcoat 501 Converter
15 - 30 % by volume	R....	ALEXSEAL® Topcoat Reducer

Example: 1 : 1 : 3/10 = 15 % reduction up to 1 : 1 : 3/5 = 30 % reduction

The amount of reducer required may vary depending on the application conditions.

Subsequent sanding with 400 - 500 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.

## 8. Application

Viscosity	Zahn #2: ≈ 22 - 28 sec, DIN 4 cup 4mm: ≈ 14 - 18 sec
Nozzle Size Gravity Gun	1.2 - 1.4 mm (0.042 - 0.055)
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.051)
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI)
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI)

ALEXSEAL® Metallic Base Coat is intended to be part of a base coat / clear coat finish. This system needs to be applied in 3 steps.



## Clear Gloss for Metallic

### 1. Introduction

ALEXSEAL® Premium Topcoat 501 Clear is a two component, polyurethane-based coating, designed for a Base Coat / 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.

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® Premium Topcoat 501 Clear offers excellent gloss values, even under extreme climatic conditions. Additionally the material is highly resistant to UV rays, salt water, abrasion and fuel.

### 2. Range of Application

ALEXSEAL® Premium Topcoat 501 is used as an extreme high-gloss topcoat in spray applications. It can be used internally or externally in areas not subject to permanent water immersion.

### 3. Coverage

Volume Solids catalyzed without reduction: 43%



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base and converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in μm (mils)
<b>Theoretical</b>	6	22.7	244	75 ( 3 )
<b>Practical</b>				
Conventional Air Spray Equipment	3.6	13.6	146	75 ( 3 )
HVLP Air Spray Equipment	4.5	17	183	75 ( 3 )

### 5. Surface pre-treatment

ALEXSEAL® Premium Topcoat 501 Clear Gloss has to be applied after the ALEXSEAL® Metallic Base Coat has dried a minimum of 2 hours at 30°C (85°F), longer times for lower temperatures or higher humidity, see chart below, up to a maximum of 12 hours at 25°C. Apply 2-3 coats of ALEXSEAL® Premium Topcoat 501 Clear in order to seal the Metallic Base Coat.

To achieve a higher level of gloss and a more durable finish, a second application of 2 - 3 coats of ALEXSEAL® Premium Topcoat 501 Clear Gloss may be needed. Careful sanding of the first coat with 320-400 grit dry sand paper by machine and 500 – 800 grit wet sand paper is possible after a period of at least 12 hours (4 days is optimal) depending on the conditions, in order to avoid damaging the metallic surface. Note: it is important not to break through the Clear Gloss when sanding, this can effect or change the color of the metallic.

## 6. Trade Names

Base Material	T0125	ALEXSEAL® Premium Topcoat 501 Clear Gloss
Converter Spray	C5051	ALEXSEAL® Topcoat Converter Spray
Reducer Superfast	R5090	ALEXSEAL® Topcoat Reducer Superfast (spray)
Reducer Fast	R5070	ALEXSEAL® Topcoat Reducer Fast (spray)
Reducer Med	R5050	ALEXSEAL® Topcoat Reducer Medium (spray)
Reducer Slow	R5030	ALEXSEAL® Topcoat Reducer Slow (spray)
Accelerator	A5035	ALEXSEAL® Topcoat 501 Accelerator

## 7. Mixing Ratio

### Spray

1 part by volume	T0125	ALEXSEAL® Premium Topcoat 501 Clear Gloss
1 part by volume	C5051	ALEXSEAL® Topcoat Converter Spray
15 to 30 % by volume	R....	ALEXSEAL® Topcoat Reducer (choose from list above)

Example: 1 : 1 : 1/2 = 25 % reduction

The amount of reducer required may vary depending on the application conditions. Mixed material must be filtered before application.

## 8. Application

Viscosity	Zahn #2: ≈ 15 - 17 sec, DIN 4 cup 4mm: ≈ 12 - 14 sec
Nozzle Size Gravity Gun	1.0 mm - 1.4 mm (0.040 - 0.055) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP

### Application by Spraying

Apply 2 - 3 coats to a wet film thickness (WFT) of 50 - 2 - 3 mils (75 microns) per coat. Allow 20 - 60 minutes tack up between coats. This will achieve a dry film thickness (DFT) of 1.5 - 2 mils (30 - 50 microns) for a 2 coat application. For a 3 coat application, this will achieve a dry film thickness (DFT) of 2.5 - 3 mils (50 - 75 microns). Maximum recommended film thickness during a spray application is 3 coats totalling 12 mils (300 microns) WFT, or 4.5 mils (100 microns) DFT.



## Waterborne Topcoat

### 1. Introduction

ALEXSEAL® Waterborne Topcoat is a water reducible two component paint based on polyurethane technology.

After curing, the material is characterized by a high gloss retention and color resistance even under extreme climatic conditions. Moreover, the cured film is resistant to abrasion, scratching, solvents, chemicals, synthetic cooling agents and hydraulic oils.

### 2. Range of Application

ALEXSEAL® Waterborne Topcoat is used in engine rooms and lockers as well as other surfaces where a waterborne product is desired.

### 3. Color

ALEXSEAL® Waterborne Topcoat is available in standard factory packaged colors only.

### 4. Coverage

Coverage for ALEXSEAL® Waterborne Topcoat when applying 2 coats.

Volume Solids catalyzed without reduction: 36 %.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in µm (mils)
<b>Theoretical / Brush and Roller</b>	12	45	484	50 ( 2 )
<b>Practical</b>				
Conventional Air Spray Equipment	7.2	27.2	293	50 ( 2 )
HVLP Air Spray Equipment	8.4	31.7	342	50 ( 2 )

### 5. Substrate Pre-treatment

The substrate must be clean, dry and free from dust and grease. Due to its good adhesion properties ALEXSEAL® Waterborne Topcoat may be applied directly to fiberglass.

### 6. Trade Names

Base Material	W....	ALEXSEAL® Waterborne Topcoat (Base Color)
Converter	C9929	ALEXSEAL® Waterborne Topcoat Converter
Reducer	Distilled Water	

## 7. Mixing Ratio Spray

4 parts by volume	W....	ALEXSEAL® Waterborne Topcoat (Base Color)
1 part by volume	C9929	ALEXSEAL® Waterborne Topcoat Converter
10 - 15 % by volume	Distilled Water	

Example: 4 : 1 : 1/2 to 3/4 = 20 % reduction

### Brush and Rolling

4 parts by volume	W....	ALEXSEAL® Waterborne Topcoat (Base Color)
1 part by volume	C9929	ALEXSEAL® Waterborne Topcoat Converter
5 - 10 % by volume	Distilled Water	

Example: 4 : 1 : ¼ up to 1/2 = 5 - 10 % reduction

The amount of reducer required may vary depending on the application conditions. Mixed material must be filtered before application.

Mix ALEXSEAL® Waterborne Topcoat Base and ALEXSEAL® Waterborne Topcoat Converter with a high speed mixer for approximately 2 minutes. After this, adjust the application viscosity by adding water.

## 8. Application

Viscosity	Zahn #2: ≈ 37 - 50 sec, DIN 4 cup 4mm: ≈ 30 - 40 sec
Nozzle Size Gravity Gun	1.0 - 1.4 mm (0.040 - 0.050) - Conventional & HVLP
Nozzle Size Siphon Cup	1.2 - 1.6 mm (0.046 - 0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.2 mm (0.040 - 0.042) - Conventional & HVLP
Atomizing Pressure	3.0 - 3.5 bar (42 - 50 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP

### Application by Spraying

Apply 2 coats to a wet film thickness (WFT) of 6 2.5 - 3 mils (60 - 80 microns) per coat. Allow 60 minutes flash time between coats. This will achieve a dry film thickness (DFT) of 1.2 - 1.6 mils (30 - 40 microns) for a 2 coat application. Maximum recommended film thickness during a spray application is 2 coats totalling 2.5 - 3 mils (60 - 80 microns) WFT, or 1.2 - 1.6 mils (30 - 40 microns). DFT.



## Interior Urethane Coating

### 1. Introduction

ALEXSEAL® Interior Coating is a two component, polyurethane based material used where an extremely durable coating is required. Good adhesion properties on a variety of substrates, combined with high resistance values make ALEXSEAL® Interior Coating suitable for many areas of application.

The cured film is resistant to abrasion, scratching, solvents, chemicals, synthetic cooling agents and hydraulic oils.

This coating is recommended for interior applications only. If objects exposed to extreme weather conditions are not cleaned regularly, UV rays will cause slight gloss and color changes. However, this does not affect the film's protective properties.

### 2. Range of Application

ALEXSEAL® Interior Coating is used for parts in the engine room and the yacht's interior.

### 3. Color

ALEXSEAL® Interior Coating 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

Coverage for ALEXSEAL® Interior Coating when applying 2 coats.



#### Note:

Coverage rates are figured for base and converter. Reducer is added as percent of total quantity of base & converter.

	m <sup>2</sup> / liter	m <sup>2</sup> / gal	sq. ft. / gal	@ DFT in µm (mils)
<b>Theoretical / Brush and Roller</b>	8	30.3	326	50 ( 2 )
<b>Practical</b>				
Conventional Air Spray Equipment	5	19	204	50 ( 2 )
HVLP Air Spray Equipment	6	22.7	244	50 ( 2 )
Airless Spray Equipment	8	30.3	326	50 ( 2 )

Volume Solids catalyzed without reduction: 40 %.

### 5. Substrate Pre-treatment

The substrate must be clean, dry and free from dust and grease. Due to its good adhesion properties ALEXSEAL® Interior Coating is applied directly onto the appropriately cleaned and pretreated substrate, even if substrates are difficult to coat, e.g. aluminum.

For optimum corrosion protection use of primer may be required. Consult your ALEXSEAL® representative for more information regarding primers.

## 6. Trade Names

Base Material	N....	ALEXSEAL® Interior Coating (Base Color)
Converter	C6402	ALEXSEAL® Interior Coating Converter
Reducer	R6062	ALEXSEAL® Interior Coating Reducer
	R6068	ALEXSEAL® Interior Coating Reducer Slow

## 7. Mixing Ratio Spray

4 parts by volume	N....	ALEXSEAL® Interior Coating (Base Color)
1 part by volume	C6402	ALEXSEAL® Interior Coating Converter
20 to 30 % by volume	R6062	ALEXSEAL® Interior Coating Reducer
	R6068	ALEXSEAL® Interior Coating Reducer Slow

Example: 4 : 1 : 1 to 1 1/2 = 20 to 30 % reduction.

## Brush and Rolling

4 parts by volume	N....	ALEXSEAL® Interior Coating (Base Color)
1 part by volume	C6402	ALEXSEAL® Interior Coating Converter
5 % by volume	R6062	ALEXSEAL® Interior Coating Reducer
or	R6068	ALEXSEAL® Interior Coating Reducer Slow

Example: 4 : 1 : 1/4 = 5 % reduction

The amount of reducer required may vary depending on the application conditions. Mixed material must be filtered before application.

## 8. Application

Viscosity	Zahn #2: ≈ 15 - 18 sec, DIN 4 cup 4mm: ≈ 12 - 18 sec
Nozzle Size Gravity Gun	1.2 mm - 1.6 mm (0.047 - 0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 - 1.3 mm (0.040 - 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 - 5.0 bar (42 - 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 - 1.5 bar (10 - 20 PSI) - Conventional & HVLP
Airless Equipment	0.18 - 0.28 mm (0.007 - 0.011) Inlet pressure 3.0 - 5.0 bar (42 - 70 PSI)

### Application by Spraying

Apply 2 coats to a wet film thickness (WFT) of 2 - 3 mils (50 - 75 microns) per coat. Allow 20 - 60 minutes flash time between coats. This will achieve a dry film thickness (DFT) of 1.5 - 2 mils (30 - 50 microns) for a 2 coat application. Maximum recommended film thickness during a spray application is 2 coats totalling 7 - 9 mils (180 - 220 microns) WFT, or 2.5 - 3 mils (60 - 70 microns) DFT.





# Product Overview

## ALEXSEAL® Premium Topcoat 501

### Whites

T9123	Matterhorn White	1 U.S. Gal	1 U.S. Qt
T9130	Off White	1 U.S. Gal	1 U.S. Qt
T9135	Arctic White	1 U.S. Gal	1 U.S. Qt
T9146	Carina White	1 U.S. Gal	1 U.S. Qt
T9132	Cloud White	1 U.S. Gal	1 U.S. Qt
T1150	Cream	1 U.S. Gal	1 U.S. Qt
T9138	Eggshell White	1 U.S. Gal	1 U.S. Qt
T9128	Oyster White	1 U.S. Gal	1 U.S. Qt
T9134	Snow White	1 U.S. Gal	1 U.S. Qt
T9129	Stark White	1 U.S. Gal	1 U.S. Qt
T9126	Fleet White	1 U.S. Gal	1 U.S. Qt
T9157	Blue Tone White	1 U.S. Gal	1 U.S. Qt

### Grays & Blacks

T7156	Dark Gray	1 U.S. Gal	1 U.S. Qt
T7155	Kingston Gray	1 U.S. Gal	1 U.S. Qt
T7153	Light Gray	1 U.S. Gal	1 U.S. Qt
T7152	Pearl Gray	1 U.S. Gal	1 U.S. Qt
T7154	Pegasus Gray	1 U.S. Gal	1 U.S. Qt
T7151	Whisper Gray	1 U.S. Gal	1 U.S. Qt
T9232	Super Jet Black	1 U.S. Gal	1 U.S. Qt

### Blues

T5154	Aristo Blue	1 U.S. Gal	1 U.S. Qt
T5152	Capri Blue	1 U.S. Gal	1 U.S. Qt
T5153	Flag Blue	1 U.S. Gal	1 U.S. Qt
T5151	Navy Blue	1 U.S. Gal	1 U.S. Qt
T5150	Royal Blue	1 U.S. Gal	1 U.S. Qt
T5158	Majestic Blue	1 U.S. Gal	1 U.S. Qt
T5159	Ice Blue	1 U.S. Gal	1 U.S. Qt
T5160	Stars & Stripes Blue	1 U.S. Gal	1 U.S. Qt
T5200	Midnight Blue	1 U.S. Gal	1 U.S. Qt
T5117	Sky Blue	1 U.S. Gal	1 U.S. Qt
T5182	Ethereal Blue	1 U.S. Gal	1 U.S. Qt

### Greens

T6158	Aqua Mist	1 U.S. Gal	1 U.S. Qt
T6173	Sea Foam Green	1 U.S. Gal	1 U.S. Qt
T6152	Forest Green	1 U.S. Gal	1 U.S. Qt
T6150	Jade Mist Green	1 U.S. Gal	1 U.S. Qt
T6183	Sea Frost	1 U.S. Gal	1 U.S. Qt
T6155	Dark Green	1 U.S. Gal	1 U.S. Qt

# Product Overview

## ALEXSEAL® Premium Topcoat 501 (continued)

### Reds, Oranges & Yellows

T3150	Sunfast Red	1 U.S. Gal	1 U.S. Qt
T3151	Toreador Red	1 U.S. Gal	1 U.S. Qt
T3153	Vivid Red	1 U.S. Gal	1 U.S. Qt
T3152	Wine Red	1 U.S. Gal	1 U.S. Qt
T2165	International Orange	1 U.S. Gal	1 U.S. Qt
T1232	Federal Yellow	1 U.S. Gal	1 U.S. Qt
T1237	Mellow Yellow	1 U.S. Gal	1 U.S. Qt
T1164	Fighting Lady Yellow	1 U.S. Gal	1 U.S. Qt

### Tans & Browns

T1151	Camel Beige	1 U.S. Gal	1 U.S. Qt
T1158	Moon Dust	1 U.S. Gal	1 U.S. Qt
T8168	Sable Brown	1 U.S. Gal	1 U.S. Qt
T1236	San Mateo Wheat	1 U.S. Gal	1 U.S. Qt
T1152	Savannah Beige	1 U.S. Gal	1 U.S. Qt

### Clear Gloss

T0125	Clear Gloss	1 U.S. Gal	1 U.S. Qt
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### ALEXSEAL® Premium Topcoat 501 Metallics

T0943	Silver Metallic	1 U.S. Gal	1 U.S. Qt
T0953	Storm Gray Metallic	1 U.S. Gal	1 U.S. Qt
T9449	Dark Black Metallic	1 U.S. Gal	1 U.S. Qt
T9893	Carbon Black Metallic	1 U.S. Gal	1 U.S. Qt
T0195	Lucid Gold Metallic	1 U.S. Gal	1 U.S. Qt
T0194	Inca Gold Metallic	1 U.S. Gal	1 U.S. Qt

### ALEXSEAL® Premium Topcoat Converters

C5051	Topcoat Converter Spray	1 U.S. Gal	1 U.S. Qt
C5012	Topcoat Converter Brush	½ U.S. Gal	1 U.S. Pint

### ALEXSEAL® Premium Topcoat Reducers

R5090	Topcoat Reducer Superfast	1 U.S. Gal	1 U.S. Qt
R5070	Topcoat Reducer Fast	1 U.S. Gal	1 U.S. Qt
R5050	Topcoat Reducer Medium	1 U.S. Gal	1 U.S. Qt
R5030	Topcoat Reducer Slow	1 U.S. Gal	1 U.S. Qt
R5015	Topcoat Reducer Brush	1 U.S. Gal	1 U.S. Qt

## Product Overview

### ALEXSEAL® Auxiliary Products

A5035	Topcoat 501 Accelerator		4 U.S. oz
A4030	Accelerator for Super Build 302		1 U.S. Pint
A4429	Accelerator for Finish Primer 442		1 U.S. Pint
A5023	Flattening Additive	1 U.S. Gal	1 U.S. Qt
A5003	Non Skid Fine		1.98 U.S. lb
A5007	Non Skid Coarse		1.98 U.S. lb
A9091	Surface Degreaser / Dewaxer		1 U.S. Gal
A9049	Wipe Down Solvent	1 U.S. Gal	1 U.S. Qt

### ALEXSEAL® Finishing Primer 442

P4420	Finish Primer 442, White	1 U.S. Gal	1 U.S. Qt
P4423	Finish Primer 442, Gray	1 U.S. Gal	1 U.S. Qt
C4427	Finish Primer 442 Converter	1 U.S. Gal	1 U.S. Qt
R4042	Epoxy Primer Reducer	1 U.S. Gal	1 U.S. Qt

### ALEXSEAL® High Build Primer and Surfacer

#### Super Build 302

P3002	Super Build 302, White		1 U.S. Gal
C3052	Super Build 302 Converter		1 U.S. Gal
R3040	High Build Epoxy Reducer	1 U.S. Gal	1 U.S. Qt

#### Fine Filler 303

P3033	Fine Filler 303, Light Gray		1 U.S. Gal
C3034	Fine Filler 303 Converter		½ U.S. Gal

#### Spray Fair 328

P3280	Spray Fair 328, Tan		1 U.S. Gal
C3287	Spray Fair 328 Converter		1 U.S. Gal
R3040	High Build Epoxy Reducer	1 U.S. Gal	1 U.S. Qt

### ALEXSEAL® Fairing Compounds

P2094	Fairing Compound 202 Base, White	2 U.S. Gal	½ U.S. Gal
P2083	Fairing Compound 202 Thick Base, White	2 U.S. Gal	½ U.S. Gal
C2075	Fairing Compound 202 Converter, DK Gray	2 U.S. Gal	½ U.S. Gal
C2017	Fairing Compound 202 Fast Converter, Red	2 U.S. Gal	½ U.S. Gal

## Product Overview

### ALEXSEAL® Protective Primers

#### Protective Primer 161

P1610	Protective Primer 161, White		1 U.S. Gal
P1615	Protective Primer 161, Yellow		1 U.S. Gal
C1617	Protective Primer 161 Converter		0.17 U.S. Gal
R4042	Epoxy Primer Reducer	1 U.S. Gal	1 U.S. Qt

#### CF Metal Primer 156

P1566	CF Metal Primer 156, White	1 U.S. Gal	1 U.S. Qt
C1567	CF Metal Primer 156 Converter	½ U.S. Gal	1 U.S. Pint
R4042	Epoxy Primer Reducer	1 U.S. Gal	1 U.S. Qt

#### Cor Spec Primer 135

P1352	Cor Spec Primer 135	0.75 U.S. Gal	1 U.S. Pint
C1357	Cor Spec Converter 135	1 U.S. Qt	7 U.S. Oz

#### Wash Primer 133

P1331	Wash Primer 133, Yellow Green		1 U.S. Qt
C1334	Wash Primer 133 Converter		7 U.S. Oz
R1338	Wash Primer 133 Reducer	1 U.S. Qt	1 U.S. Qt



## Product Overview (Metallic Topcoat)

### ALEXSEAL® Metallic Topcoats

#### Silvers & Blacks

M9392	Pure Silver	1 U.S. Gal	1 U.S. Qt
M9389	Anniversary Silver	1 U.S. Gal	1 U.S. Qt
M7905	Stardust Silver	1 U.S. Gal	1 U.S. Qt
M7928	Snowpack Silver	1 U.S. Gal	1 U.S. Qt
M7916	Midnight Gray	1 U.S. Gal	1 U.S. Qt
M9394	Flint Black	1 U.S. Gal	1 U.S. Qt
M9388	Black Majic	1 U.S. Gal	1 U.S. Qt

#### Blues

M5904	Blue Horizon	1 U.S. Gal	1 U.S. Qt
M5914	Peppermint Blue	1 U.S. Gal	1 U.S. Qt
M5922	Palma Blue	1 U.S. Gal	1 U.S. Qt
M5927	Dolphine Blue	1 U.S. Gal	1 U.S. Qt
M5915	Blue Topaz	1 U.S. Gal	1 U.S. Qt
M5918	Royal Nights	1 U.S. Gal	1 U.S. Qt

#### Greens

M6915	Velvet Green	1 U.S. Gal	1 U.S. Qt
M6919	Luna Green	1 U.S. Gal	1 U.S. Qt
M6921	Shadow Green	1 U.S. Gal	1 U.S. Qt

#### Tans & Browns

M8944	Hazelnut	1 U.S. Gal	1 U.S. Qt
M8945	Diamond Gray	1 U.S. Gal	1 U.S. Qt
M8949	Mocha Brown	1 U.S. Gal	1 U.S. Qt

#### Reds, Oranges & Yellows

M3905	Royal Rubie	1 U.S. Gal	1 U.S. Qt
M3970	Coral Red	1 U.S. Gal	1 U.S. Qt
M3971	Sunstone Red	1 U.S. Gal	1 U.S. Qt

#### Gold

M1918	Sahara Gold	1 U.S. Gal	1 U.S. Qt
M1920	Gold Rush	1 U.S. Gal	1 U.S. Qt



#### Note:

ALEXSEAL® Metallic Topcoats utilize the same converters, reducers and Clear Gloss products as the Premium Topcoat 501 series.



## Product Overview (Interior Coatings)

### ALEXSEAL® Waterborne Topcoat

W9132	Cloud White	1 U.S. Gal
W9134	Snow White	1 U.S. Gal
W9123	Matterhorne White	1 U.S. Gal

### ALEXSEAL® Waterborne Converters

C9929	Interior Coating Converter	1 U.S. Qt
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### ALEXSEAL® Interior Coating

#### Whites

N9132	Cloud White	1 U.S. Gal
N9129	Stark White	1 U.S. Gal
N9134	Snow White	1 U.S. Gal
N9123	Matterhorn White	1 U.S. Gal
N9190	Annakin White	1 U.S. Gal

#### Browns

N8157	Accent Brown	1 U.S. Gal
N1221	Whisper Wall Cream	1 U.S. Gal
N8165	Maple	1 U.S. Gal

#### Black

N9232	Super Jet Black	1 U.S. Gal
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#### Metallic

N9398	White Aluminum	1 U.S. Gal
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### ALEXSEAL® Interior Coating Converter

C6402	Interior Coating Converter	1 U.S. Qt
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### ALEXSEAL® Interior Coating Reducers

R6062	Interior Coating Reducer	1 U.S. Gal
R6068	Interior Coating Reducer Slow	1 U.S. Gal

**Accelerator:**

A chemical compound that accelerates curing of resin materials.

**Acrylic:**

Coating based on a polymer containing short carbon chain esters of acrylic and methacrylic acid.

**Activator:**

A curing agent or converter used to bring about a reaction with a polymer.

**Adhesion/Adhesive:**

Surface attraction that attaches one material's surface to another.

**Air Cap:**

Component located at the front of a spray nozzle which channels compressed air against the sprayed material to create a mist or atomized cloud of tiny droplets.

**Air Flow:**

The amount of air moving through a defined area, such as the spray gun tip.

**Air Pressure:**

The relative force of air in a defined area or volume.

**Airless Spray:**

A method of painting that uses high pressures to spray paint or other materials. Airless sprayers work by forcing paint through a small tip opening at very high pressure, rather than using compressed air.

**Air Spray:**

Painting system in which paint is formed into tiny droplets suspended in air. The paint is atomized into droplets by a spray gun as a result of being forced into an air stream moving at relatively high speed. The pattern and concentration of the resulting paint spray cloud can be controlled by air pressure, paint viscosity, and gun tip size and angle.

**Atomization:**

Reduction of a material into tiny particles or a fine spray.

**Bar:**

The bar is a unit of pressure equal to 100 kilopascals and roughly equal to the atmospheric pressure on Earth at sea level. 1 bar is approximately equal to 14.5038 PSI.

**Blasting:**

Use of an abrasive under pressure to remove coatings or surface contamination that is too difficult to remove by other means.

**Blistering:**

Paint deformity that occurs when a layer of paint loses adhesion and separates from another layer

**Break-Free Rinse:**

The condition of water sheeting out completely over a surface. A break-free rinse indicates a surface is free of dust, grease and other containments.

**Brush Ferrule:**

The metal band that binds the bristles or hair of a brush to its handle.

**Catalyst:**

A substance that increases the rate of a chemical reaction without being consumed in the process.

**Chromate:**

A corrosion inhibitor that is used to treat reactive metals such as aluminum, copper and zinc. The addition of chromate to a coating is very effective at inhibiting corrosion caused by oxidation. Chromium is toxic and, thus, highly regulated in many areas of the world, including Europe.

**Clear Gloss:**

A transparent polyurethane coating that can be applied over substrates and coatings.

**Converter:**

Compound used in two component coatings that contains resin and solvent. Converter is mixed with the base product in specific volumes and acts as a catalyst to harden the other compound.

**Corrosion:**

Deterioration or deformation of a substrate usually attributed to oxidation, electrolysis or other chemical reaction that causes pieces of a substrate to react and detach from the original substance they were part of.

**Coverage:**

The measured area a certain quantity of paint will cover at a given thickness.

**Curing:**

The process in which a chemical reaction occurs, transforming paint from one form to another.

**Crosshatch Test:**

Destructive test in which a painted area is checked for adhesion to the paint or substrate beneath it.

**Cross-Linking:**

The chemical and mechanical processes by which polymer products combine to create a single protective layer.

**Delaminating:**

A type of failure in which a layer or layers of a coating separate, flake or peel from the material to which they were attached.

# Glossary

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**Dew Point:**

Given a constant pressure, the temperature at which water vapor condenses out of the air.

**DIN Cup:**

Viscosity measurement based upon the time it takes a liquid to travel through a 4 mm hole.

**Dry Film Thickness (DFT):**

The depth or thickness of a coating on a surface after the coating has dried; usually measured in microns or mils.

**Dry Spray:**

Paint that loses an excessive amount of solvent as it passes through the air, causing it to flow poorly or not all over the surface to which it is being applied.

**Drying Time:**

Duration of time between a paint application and when it reaches a cured state.

**Dry to Tape/Mask:**

Time between a paint application and when it can be taped or masked without damaging the surface.

**Dry to Paint:**

Time between a paint application and when an additional coat can be applied with adequate adhesion.

**Dry to Touch:**

Time between a paint application and when the coating is tack-free or safe to touch.

**Enamel:**

Paint that is characterized by its ability to form a smooth surface via a chemical reaction during the curing process. Originally associated with a high gloss, but may also include lower degrees of gloss. Paint that does not contain lacquer.

**Epoxy:**

An adhesive, plastic, paint, or other material made from a class of synthetic thermosetting polymers containing epoxide. Known for strong adhesion properties, increased mechanical strength, and resistance to solvents, and corrosive agents.

**Fairing:**

The process of filling and removing material on a substrate to achieve a linear, uniform surface.

**Fairing Compound:**

Material used to fill depressions in a substrate. Binds to the substrate while being conducive to sanding, surfacing and finishing to achieve a smooth surface.

**Film Thickness Gauge:**

A precise measuring device that indicates the thickness of a layer of paint or material.

# Glossary

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**Finish Coat:**

Also see Topcoat – the protective, final coating of paint with properties that are resistant to environmental factors and protects the substrate or underlying surface.

**Fluid Nozzle:**

A precise valve at the output end of a spray gun that causes paint and solvent to break into small pieces or droplets that will attach to a surface.

**Gelcoat:**

Material usually applied to fiberglass structure in a mold which creates a finish on the visible side of the material. The most common gelcoats are unsaturated polyurethane resin based.

**Gravity Gun:**

Spray gun that feeds paint to the nozzle from a reservoir located above the spray head.

**Grinding:**

Process using a powered abrasive device for the removal of material that cannot be removed with solvent or sanding.

**Grit:**

Measuring standard for the abrasive quality of sandpaper. As grit numbers increase, the size of the abrasive decreases. The letter “P” is used to identify a paper that has been tested to ensure consistency.

**GRP:**

Glass Reinforced Plastic, general term that covers all types of fiberglass substrates.

**Guide Coat:**

A temporary paint, dye or chalk material used to mark areas of a surface in the sanding process. As higher relief areas are sanded, the guide coat is removed.

**Incompatibility:**

When a coating does not possess the chemical or mechanical characteristics to bind to another surface or coating.

**Induction:**

Time required for base and converter compounds to cross-link or bind chemically. Induction time before application is essential for coatings to possess proper adhesion qualities.

**Inlet Pressure:**

Air pressure measured at the spray gun. Best monitored and controlled with a regulator.

**Inter-coat Adhesion:**

The adhesion or bond that exists between two separate layers of paint.

**Isocyanate:**

Hydroxyl chemical group that reacts to form a polymer. Used in polyurethane topcoat converters.

# Glossary

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**Lacquer:**

A clear or colored paint or varnish that cures by evaporation of a solvent.

**Masking:**

Application of material to prevent paint from reaching an area or component.

**Material Safety Data Sheet**

A form with data regarding the properties of a particular substance. MSDS (material safety data sheets) are a widely used system for cataloging information on chemicals, chemical compounds, and chemical mixtures.

**Mixing Chart:**

Product preparation guide used to illustrate precise ratios of material that combine to form a usable coating.

**Nap:**

The raised (fuzzy) surface used describe the thickness and absorption characteristics of a paint roller.

**Nozzle Size:**

Metric or Imperial measurement denoting the size of the opening where the paint exits the spraying device.

**Osmosis:**

The movement of molecules through a membrane or material from an area of greater concentration to an area of lesser concentration.

**Overcoat:**

Describes when a different product can be applied over an already applied coating. Additional coating of paint that interlocks with subsequent layers through adhesive properties.

**Overspray:**

Paint spray that adheres to an area outside the area targeted for coverage.

**Oxidation/Oxidizing:**

Corrosive process in which a material changes composition through a chemical reaction with the air, water or other material.

**Paint:**

An applicable liquid which dries to a solid film through an evaporative or chemical process for the purpose of decoration and/or protection of a substrate.

**Phenolic:**

A material or compound containing phenols (carbolic acid). Phenols are closely related to alcohol, but contain higher acidity levels.

**Polyester:**

Polymers which contain the ester functional group in their main chain.

# Glossary

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**Polymers:**

Plastics that are composed of large molecules with repeating structural units.

**Polyurethane:**

Any polymer composed of a chain of organic units joined by a urethane link.

**Post-cure:**

The process of heating a surface in order to expose the coatings and substrate to the working temperature when the surface is exposed to the sun. This is typically done to prevent print-through.

**Pot Life:**

The period of time that a coating remains useful after opening or after a catalyst or other additive has been mixed. Also known as usable life.

**Primer:**

Coating applied to a surface or substrate to increase its binding and adhesion for subsequent coatings as well as improving corrosion resistance for the underlying surface or substrate.

**Print-Through:**

(sometimes referred to as bleed-through) is a generally undesirable effect where the underlying substrate is visible through the final topcoat of paint.

**Profile:**

The elevation or relief of a surface when viewed from the side.

**Protective Primer:**

A special grade of primers that contain additives that provide additional inhibitors to corrosion. ALEXSEAL® Protective Primers 161, 156 or 135 are uniquely formulated to provide additional protection for metal substrates from corrosive elements.

**PSI:**

Pounds per Square Inch – a measurement of air pressure that is equivalent to 0.068947 bar.

**Re-coat:**

Term describing when a second coat of the same coating product may be applied, typically without sanding.

**Reducer:**

A solvent material added to paint to lower the viscosity of the final material.

**Resin/Epoxy Resin:**

A hydrocarbon compound used in the production of varnishes, adhesives & coatings. Typically mixed with a hardener to create a very hard, durable plastic substrate used commonly in boat building.

**Rheology:**

The manner in which liquid paint flows over a surface.

# Glossary

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**Sheeting Out:**

When a water rinse flows over a surface in a continuous sheet with no breaks or interruption in consistency. Also known as a “break-free rinse,” indicating the absence of contaminants.

**Siphon Cup:**

A spray gun system that draws paint up into the spray head from a reservoir located below the spray head or atomizer.

**Solvent:**

A material with enhanced evaporative properties used to dissolve, dilute, and suspend paint materials.

**Spray:**

The atomized paint particulates emitted from an atomizer or spray gun.

**Spray Chart:**

Reference data that shows settings and ratios required to properly apply a coating via various spray gun equipment.

**Substrate:**

The underlying surface material that coatings and finishes are applied to protect and enhance.

**Surfacing:**

A final type of fairing in which comparatively minor surface imperfections are filled and/or sanded to achieve a linear uniform surface.

**Tack Rag:**

A special wiping cloth treated with a sticky additive. Tack rags are used to remove loose particles of dust, dirt and small particles that might contaminate a surface.

**Tape Dry**

Time between a paint application and when it can be taped without damaging the surface.

**Technical Data Sheets**

A document summarizing the performance, technical characteristics and usage procedures of a product.

**Topcoat:**

Also see finish coat – the final protective and decorative coating of paint.

**Viscometer:**

Device used to measure the thickness or density of a liquid.

**Viscosity:**

The thickness or density of a liquid usually measured in Zahn cup or DIN cup.

# Glossary

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**VOC:**

Volatile Organic Compounds – hazardous emitted chemicals that may be carcinogenic or otherwise toxic to living organisms.

**Wet Edge:**

A characteristic of paint maintaining a liquid or “wet” state as it is applied by brush or roller, so that additional strokes of paint will not reveal the edges of previous brush/roller strokes.

**Wet Film Thickness (WFT):**

Paint film thickness measured while it is still wet immediately after application. Measuring WFT will help determine how much material to apply wet to achieve a specified dry film thickness (DFT).

**Wipe Down Solvent:**

Liquid solution used to remove contaminants and impurities on a primed or coated surface. ALEXSEAL® Wipe Down Solvent (A9049) is an example of a Wipe Down Solvent.

**Zahn Cup:**

Viscosity measurement used primarily in the painting industry. There are 5 cup specifications in the Zahn standard of measurement.





# ALEXSEAL®

Yacht Coatings



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