



Applying Ironside Urethane (SM-266)

Ironside Urethane is a super-duty professional type marine protective coating that produces unequalled performance properties over a wide variety of substrates. Ironside Urethane may easily be brushed, rolled or sprayed. A superior formula that out performs competing marine paints in heavy duty, industrial, commercial as well as sport and pleasure craft applications. It is acceptable for use on fiberglass, aluminum, steel, wood, composite and synthetic materials.

While gel coat and many marine paints quickly chalk and fade, require regular cleaning, waxing and buffing to maintain their appearance Ironside Urethane continues to maintain its color, gloss and shine without yellowing. It provides a bright, smooth "lively" protective finish for years. When impacted or abraded it will not crack or spider-web like gel coat. It is acceptable for use on almost any marine surface or infrastructure and it is long term submersible making it acceptable for use above and below the waterline. It has been formulated to withstand the harshest chemicals, spilled fuel and acids making it a favorite where chemicals and fuel are regularly present. It will withstand spilled fuel or battery acid for 7 days with little or no effect!

Ironside Urethane self levels well. It has a long pot life making it easier to use. The cured film has a soft, smooth glossy appearance with the cured finish being deceptively durable. It is easy to apply, lasts longer and saves money on scheduled maintenance providing a high level of corrosion resistance.

PRODUCT SPECIFICATIONS

Product type: Non-Yellowing Aliphatic Acrylic Urethane (2 Components).

Product benefits: Non-yellowing formula offers high chemical resistance, hard yet flexible film, available in a variety of sheen levels, has excellent gloss retention, self leveling film, excellent adhesion to prepared surfaces, resistant to many alkalis, high water-resistance, resistant to spilled fuel, battery acid, chalking, fading & chipping, resists peeling & cracking, weather-resistant, withstands heat to 500F.

Physical Characteristics:

VISCOSITY: +/- 80 sec #4 Zahn cup. (mixed)	WEIGHT SOLIDS: 70% +/- 2% (mixed)
DRY TO TOUCH: 30 minutes-1 hour	TACK FREE: 5 hours
VOLUME SOLIDS: 53% (mixed)	TIME TO RECOAT: < 6 hrs.
WT PER GAL: 10.75 lbs. per gal. (mixed)	DRY HARD: 8 hours
V.O.C.: 380 grams per liter	COLOR RANGE: Whites and Tints
FLASH POINT: 60° F.	PACKAGING: One gallon kits

SUNDRIES

Sandpaper-80 grit for repairs 120 grit for rough sanding-180 grit for finish sanding. Non-shedding roller covers, roller frame, roller tray and natural bristle brushes, rubber gloves.

RECOMMENDED CLEANERS

SM-695 Etching Cleaner de-waxes, cleans and deglazes most any surface. Where rust is present recommend SM-5679 Rust Converting Cleaner.

RECOMMENDED PRIMERS

Aluminum: SM-117 Pre-Wash Pre-treatment Wash Primer, SM-664D Etching Primer, SM-1184 Zinc Chromate Primer, SM-1757 Zinc-Plate Primer, SM-7390 Polyamide Epoxy Primer.

Fiberglass: SM-664D Etching Primer, SM-7390 Polyamide Epoxy Primer.

Wood: SM-664D Etching Primer, SM-7390 Polyamide Epoxy Primer.

Steel: SM-1184 Zinc Chromate Primer, SM-1757 Zinc-Plate Primer, SM-5000 Zinc Plate, SM-7390 Polyamide Epoxy Primer.

RECOMMENDED THINNER

SM-605 Thinner. Do not substitute.

ACCELERATOR/HARDENERS

B-Component is included with each purchase at no additional cost.

APPLICATION

All applications should begin with the removal of hardware, ventilators, bang irons and decorative name plates. After that, the steps to prepare a boat for paint or a clear coating are only slightly different from those taken with wood, fiberglass, aluminum or steel. The difference between an amateur and professional application is often preparation. The smart painter puts most of his effort into preparing the boat for painting. The old saying is true that 99% of a good paint job lies in preparation and 99% of paint failures are due to poor preparation. This is a statistic you do not want applied to you! Do not cut corners when preparing your boat for paint!

Previously painted boats: Best results will be achieved when most or all old paints have been completely removed and primer applied to all surfaces, however, paint in good condition may be cleaned and de-waxed with SM-695 Etching Cleaner then sanded with a finish of 180-220 grit sandpaper in preparation for paint. An orbital palm sander or dual-action rotary sander will be less strenuous than hand sanding. Sanding will reveal areas that are blistered or flaking requiring removal. Such areas should be repaired if needed and properly primed. Hand sand to feather the repair to the level of the rest of the existing paint for best results. Scrapes, scratches and divots may be filled with painter's glazing compound prior to painting. Trowel it into the blemish with a putty knife allowing it to set up before sanding smooth. All repairs and glazing compounds should be primed and sanded before proceeding with paint.

Preparation on Fiberglass & Aluminum: Loose scale, peeling or cracking paint, corrosion, dirt, grime, oil, grease and wax all must be thoroughly *removed. Always clean thoroughly before making any repairs or sanding. Wax removal is critical and should be done with SM-695 Etching Cleaner or a commercial wax remover. Where silicone polishes are present be sure to use a blended solvent polish remover to remove silicone. A second application of cleaner is helpful. Once cleaned, abrade all surfaces to promote adhesion. Gouges and scrapes may be filled with epoxy putty. Build up the epoxy above the surrounding surface so that it can be sanded smooth. Epoxy filler is hard so power sanding is advised. A dual-action rotary sander achieves the best results however a good orbital palm sander is acceptable. Rough sand the patch with 80 grit then switch to 120 grit sandpaper to achieve the final contour. Once repairs have been completed

sand the entire area to be refinished with 180-220 grit sandpaper then clean with a pre-paint cleaner or recommended solvent.

Preparing Raw Wood (Unpainted): Bare wood should be sanded smooth with 80 grit paper before the application of SM-664D Etching Primer. Select this primer to fill the grain of the wood and create a smooth easy to adhere to surface for the paint. It has an unusually high amount of solid material, sands beautifully and locks our air and moisture. Recommend allowing primer to dry for 2-4 hours before sanding with 120 grit paper. Often repeated coats are applied to achieve a smooth finished surface. Repeated primer coats and sanding may be continued until the grain has been filled and the surface is completely smooth. Recommend 180 grit sandpaper for use in finish sanding.

Fasteners in wood hulls are always countersunk below the surface of the planks. It is necessary to fill these countersinks in order to achieve a completely smooth finish. Surfacing putties are preferred over epoxy or polyester putties because epoxy putties can be harder to remove should it ever become necessary to remove a plank for repair. Carvel planked boats require a seam compound. Traditional seam compounds are never applied until after the hull has received a primer base coat. Traditional seam compounds should never be applied to bare wood, however, polysulfide seam compounds must be applied only to bare wood. Apply polysulfide seam compounds into the seam prior to applying primer.

Preparing Wood (Previously Painted): Paint in good condition should be sanded with 120 grit paper to knock off the gloss. Orbital palm sanders or dual action rotary sanders make *sanding large areas much easier. Sanding usually reveals paint that has blistered or flaked requiring scraping the hull and sanding to bare wood. Such areas should filled, primed and sanded smooth. The inevitable sunken fastener holes, scratches and dings should be filled with painter's glazing compound – not to be confused with glazing putty used to keep glass in home windows. Marine glazing compound is a fine putty intended for repairing small surface blemishes prior to painting. Apply to the blemish area with a putty knife, allow it to cure thoroughly then sand surface to a smooth finish. Deteriorating Paint should be completely removed from the hull before repairs or primer is applied. Power sanding is preferred over paint remover. This process is referred to as "wooding down." Once the old paint has been removed prepare the hull as if it were new bare wood. Finish sand to 180 – 220 grit.

Preparation on Steel: Proper surface preparation is vital. Previously painted surfaces must be thoroughly cleaned and free of residues, oily film, and loose paint chips. All rust, loose scale and contaminates must be thoroughly removed prior to the application of primer. Preparation should include wire brushing by hand, mechanical grinding and or sand blasting of all surfaces. Rust should be treated with SM-5679 Rust Converting Cleaner. Rust free and galvanized metals should be treated with SM-695 Etching Cleaner. Once all surfaces have been carefully prepared, rust, oil, grease and contaminates removed, the application of recommended primer should be applied without delay to prevent new corrosion. Surfaces treated with SM-5679 Rust Converting Cleaner within 24 hours (See Performance Data Sheets and MSDS for SM-5679 and SM-695 for further information).

Primer: Aluminum, fiberglass, existing epoxy and gel coat are "hard to paint" surfaces often requiring an etching primer. SM-664D Etching Primer is recommended for use on all gel coat, epoxy, raw fiberglass and wooden surfaces. It is a superior government specification formula (TT-P-664C/D) that is very well liked in this application. While epoxy primer will work SM-664D Etching Primer outperforms epoxy primers on hard to paint surfaces. You will find Etching Primer provides outstanding adhesion, build, sandability and protection from corrosion on almost any marine substrate. Its use results in better adhesion of the finish coat than can be obtained by any other process. It may applied with a brush, roller or sprayed. Using a roller speeds up the work and provides a higher film thickness than spraying. Apply a minimum of one evenly applied coat to all areas that will be painted. Film build is high making sanding surprisingly easy. Use Etching Primer as filler by simply building it up with a brush, allowing it to dry then sanding it smooth. When spraying Etching Primer it will likely need to be thinned with SM-605 Thinner. Do not substitute with other thinners! Galvanized steel, stainless steel and anodized surfaces must be

treated with a fog coat of SM-117 Prewash Primer. We recommend using SM-664D, SM-5000 or SM-7390 Primer as an intermediate primer coat before application.

Finish Coats: Current OSHA and EPA *regulations require that isocyanate urethane coatings including SM-266 Ironside Urethane only be sprayed by professionals using supplied-air respirators.

Professionally applied spray coat applications yield superior results, however this product levels exceptionally well in brush and roll applications. Unless you are experienced with spray equipment the best way for the do it yourselfer is to apply it is the "roll and tip" method. Traditionally, one person rolls a thin coat of paint onto the prepared surface while a second person follows the roller with a brush. Tipping removes bubbles created by the roller. When properly thinned and applied in appropriate temperatures it levels exceptionally well. This product sets up quickly so speedy application and proper thinning will help prevent brush or roller drag.

Spraying offers the best film thickness control however rolling is often the best way to achieve the recommended maximum Wet Film Thickness which is 4 mils. The recommended DFT (Dry Film Thickness) is 4 mils minimum. Applications applied too thickly may not adhere or level properly, run, sag take longer to cure or result in unwanted amber resin color. Always adhere to the manufacturers recommended WFT and DFT (Dry Film Thickness) for best results.

Practical Coverage: 300 square feet per gallon depending on surface and specific application requirements.

Mixing ratio: 7:1 (by volume) with SM-5729 Part B (Induction Time: 10 minutes). Ironside Urethane must always be stirred or shaken thoroughly before use.

Pot life: 4-6 hours.

Thin to a viscosity of 22-25", Zahn #2 with SM-605 Thinner. Adjust the amount of thinner as needed to meet your individual application requirements depending on ambient temperature, type of equipment used, method of application, humidity and amount of control desired and tip size in spray applications. For best results apply two or more coats to achieve the recommended DFT. For best results, apply with a conventional cup gun. When applying additional coats, recoat within 4 hours or after 24 hours (lightly sand between coats as needed).

Boot and bottom stripes should always be applied over top of the recommended DFT. For best results recoat within 4 hours or after 24 hours. Sand between coats after 48 hours. Recommended minimum cure time is 5 days under most conditions. The dry cured film may be wet sanded and buffed to remove runs and blemishes. Allow top coat film to cure thoroughly before allowing it to enter full service duty. Follow the same procedures as above for applying SM-266 Urethane Clear, however, primer is not required on most properly prepared surfaces. Clean all equipment thoroughly with SM-605 Thinner. Do not leave unused paint in spray equipment beyond the pot life of the material, it will set up hard.

What should I watch out for?

INCOMPATIBILITY ISSUES: Our guaranty is void unless used only with recommended Supermarine cleaners, thinners, accelerator/hardener and primers. When painting over preexisting primer or paint be sure it has cured before proceeding.

SOFTNESS OR WRINKLING: Strictly adhere to manufacturers recommended minimum and maximum WFT and DFT. When Ironside Urethane has been applied too thickly the coating may not dry or cure properly leading to mud cracking or inferior finish or a failed application.

RUNS & SAGS: If you get any runs or sagging, usually, it has been applied too thickly. Test for compatibility; we strongly recommend doing a small test before committing to the entire project. If the film remains soft after 48 hours, typically, it has been applied too heavily or a mixing error has been made.