

Boat Painting Guide & Colour Card

UK Edition

A white rectangular graphic with a folded top-right corner. It contains two QR codes on the left. To the right of the top QR code is a black button with the text "GET IT ON" above the Google Play logo and "Google play" below it. To the right of the bottom QR code is a black button with the text "Download on the" above the Apple logo and "App Store" below it. At the bottom of the graphic, the text "Now available as an App!" is written in blue.

GET IT ON
Google play

Download on the
App Store

Now available as an App!

For over a century we've been creating the most innovative paint solutions to protect, beautify and improve the performance of all types of boats.

No matter where you are, in whichever waters around the globe, you'll find high performance coatings backed by meticulously researched knowledge and support from International Paint.

Whether we're in the lab researching and developing new products, or at sea putting our products to the test, we're in our element. Getting the chemistry right is critical to us, as is knowing the subtle differences between people and water all over the world. Wherever there are boats, we're right at the heart of the matter, making connections, solving problems, sharing knowledge...

Our World is Water

Ask the Experts

At International Paint, we recognise the importance of providing high-quality technical support and advice to all our customers. Whether you're a novice or a more experienced DIY'er, you're sure to have a question for us – and we'd love to help – here's how you can reach us...



 yachtpaint.com

 +44 (0) 1489 77 50 50


 iyp.uk@akzonobel.com

 **Product Data Sheets**

 **Material Safety Data Sheets**

 **Product Labels**

Got a question? We've got experts who've got the answer!

 **International and the environment:** We have products and systems designed to help you reduce your boating environmental footprint. Call us or visit yachtpaint.com for more information.

Quick Reference Guide

Antifoulings	.04	Varnishes	.10
Why do I need a Thinner?	.07	Working with fillers	.12
MarineFilm™	.07	Undercoats	.13
Topsides	.08	Primers	.14

Before You Start

Health & safety	.16
-----------------	-----

'Step-by-Step' Project Guides

How to prepare bare substrates	.17	Painting your bilge	.26
Always check the weather!	.18	Preparing a non-slip deck	.27
Making small repairs to GRP	.20	Applying varnishes	.30
Removing aged finishes or varnishes	.21	Applying antifouling	.32
Removing antifouling	.22	Painting outdrives, stern gear, propellers and keels	.34
Applying finishes	.24		

Antifouling

Is my new antifouling compatible?	.36	Below water systems	.38
How much antifouling paint do I need?	.37	Propellers, outdrives and sterngear	.41

Topsides

Two-part premium paint systems	.42	Varnish systems	.44
One-part conventional paint systems	.43	Complete boatcare	.45

Blister Repair and Prevention

How to protect against osmosis	.46	How to treat osmosis	.47
Osmosis protection schemes	.47		

The Echo Program

	.48
--	-----

Colour Card

Topside Finishes	.49	Antifoulings	.52
------------------	-----	--------------	-----

Antifoulings

Use this guide to our antifouling products to help you choose the perfect product for your project.



	Micron® Optima	Micron® Extra 2	Cruiser® Uno EU	Boatguard EU	Cruiser® Bright White	Trilux 33	Interspeed Ultra 2	VC® Offshore EU	VC®17m Extra	Special Purpose
Key attributes	<ul style="list-style-type: none"> For the absolute cleanest hulls Minimum build-up – reduced preparation time Activated Biolux® technology for sustained antifouling protection Water based – low odour, easy clean up 	<ul style="list-style-type: none"> Premium, multi-season copolymer antifouling for harshest fouling areas 24 months protection from one application (3-4 coats) Minimum paint build-up, controlled eroding with use Biolux® technology for sustained antifouling protection 	<ul style="list-style-type: none"> One season's protection in all but harshest fouling conditions One coat to save time For power (up to 25 knots) and sail boats Can be re-immersed within 24 hours 	<ul style="list-style-type: none"> Cruising antifouling offering good level of protection Season-long performance Formulated specifically for use in fresh and brackish waters Can be applied up to 3 months before launch 	<ul style="list-style-type: none"> General purpose bright white cruising antifouling for outstanding appearance One seasons' protection Suitable for all substrates including aluminium For power (up to 30 knots) and sail boats 	<ul style="list-style-type: none"> Slow polishing, avoids seasonal paint build-up For all substrates including aluminium; recommended for propellers and boottops Bright colours, including bright white Effective fouling protection for up to 18 months 	<ul style="list-style-type: none"> Ultra strong formula for high fouling areas Hard, durable finish Biolux® technology for sustained antifouling protection Suitable for racing sailboats and powerboats 	<ul style="list-style-type: none"> Suitable for salt and freshwater Hard, smooth finish can be burnished to a smooth profile For racing sailing and power boats 	<ul style="list-style-type: none"> Thin film antifouling for racing sailboats and powerboats With fluoro microadditive for a low friction surface Hard, smooth surface Quick drying for fast re-launch 	<ul style="list-style-type: none"> Aerosol application for difficult to reach areas For propellers, outboards and sterngear For aluminium, stainless steel and alloy Biolux® technology for sustained antifouling protection
Thinners	Water	No. 3	No. 3	No. 3	No. 3	No. 3	No. 3	VC® General Thinner	VC® General Thinner	VC® General Thinner FOR CLEAN UP
Practical coverage (m² per litre)	8.3	9.0	9.0	9.0	9.2	8.3	9.0	10.5	11.7	1 can per medium-sized outdrive
Number of coats	2-3	2-3 (1 season) / 3-4 (2 seasons)	1-2	2-3	2-3	2-3 (1 season) / 3-4 (18 months)	2-3	2-3	2-3	3 minimum
Substrates										
Suitable for high speed craft		Up to 25 knots	Up to 25 knots		Up to 30 knots					
Application method										
Suitable for high fouling areas										

Use antifouling paints safely. Always read the label and product information before use.

GRP
 WOOD
 STEEL
 ALUMINIUM
 BRONZE
 STAINLESS STEEL
 LEAD

BRUSH
 ROLLER
 AEROSOL

GOOD
 EXCELLENT
 OUTSTANDING



Interested in the relative environmental impact* of your chosen product? For more information go to echoprogram.com. * When compared to the largest selling product in OUR range.

For comprehensive application and scheme information, always read the product data sheet before you start.

Angus Hewitt, UK Sales Team

"Need to know how to remove old antifouling?"

The answer is only a click away at yachtpaint.com



Quick Reference Guide

Why do I need a Thinner?

Thinners are solvents which are usually the same, or very similar, to those used within the product they are recommended with. Thinners can be used as an additive to ease application, or to clean brushes and equipment.



No. 1	A general purpose thinner, for use with one-part paints and varnishes.
No. 3	Typically used with antifouling paints (excluding Micron® Optima and VC® products), also used to aid with the spray application of our one-part varnishes.
No. 7	Formulated for use with epoxy type products.
No. 9	For use with two-part polyurethane products.
VC® General Thinner	Specially formulated for use with VC® products.

Topsides

Use this guide to our topside products to help you choose the perfect product for your project.



	Perfection	Toplac®	Interdeck®	Danbojine
Key attributes	<ul style="list-style-type: none"> Ultimate performance, two-part polyurethane finish Chemical cure for the hardest finish & highest abrasion resistance Unique UV protection for superior, long-lasting gloss and colour Professional-quality results made easy Easy mix ratio 	<ul style="list-style-type: none"> Premium quality high-gloss durable yacht enamel Silicone alkyd formula lasts twice as long as conventional one-part enamels Excellent UV resistance Extended gloss and colour retention characteristics Easy to apply giving deep, lustrous finish 	<ul style="list-style-type: none"> Slip resistant polyurethane deck paint Contains fine mineral additive for hard wearing, non-slip surface Suitable for all substrates Low sheen finish prevents sunlight dazzle Apply straight from the can with brush or roller 	<ul style="list-style-type: none"> Hard wearing coating for bilges, lockers and bulkheads Chemical resistance to fumes, fuel and oil High opacity for thorough coverage Cleans easily for reduced maintenance
Thinners	No. 9	No. 1	No. 1	No. 1
Practical coverage (m² per litre)	12.0	12.0	9.5	11.0
Number of coats	2-3	1-2	1-2	1-2
Substrates				
Application method				
Recommended undercoat	Perfection Undercoat	Pre-Kote	-	-
Additives	For a satin finish add: Polyurethane Matting Additive	Matting Additive	-	-
	For a non-slip finish add: Non-Slip Additive	Non-Slip Additive	-	-



What is a matting additive?...
Matting additives can be added to both International finishes and varnishes; and depending on the mix ratio between the product and the additive, a variety of gloss, satin or matt effects can be achieved. International produces two types of matting additive, suitable for use with either the two-part or one-part products in the range.



What is Non-Slip Additive?...
Non-Slip Additive is a synthetic, granular material that can be added to topside finishes prior to application or sprinkled onto wet paint as an aid to providing a more slip-resistant finish. As with the matting additives, the final result is determined by the amount of material added into the finish.



Further information on **Polyurethane Matting Additive**, **Matting Additive** and **Non-Slip Additive** and their uses can be found on the product label or on the product data sheets, which are available at yachtpaint.com

* Over suitable primer

THE ECHO PROGRAM Interested in the relative environmental impact* of your chosen product? For more information go to echoprogram.com.
* When compared to the largest selling product in OUR range.

"Need some hints and tips to achieve a professional topside finish?"

Get advice from the experts at yachtpaint.com

MarineFilm

Instant scratch repair for gelcoat and paint

- Offers a convenient and easy way to repair scratches and chips fast
- Creates an almost invisible repair
- No hassle removal when a permanent repair is made
- Quick repair to keep your boat looking its best
- Available in 12 colours to easily match gelcoat and paint

Colour Code	Similar to Perfection/Toplac®
● White 011	Mediterranean White
● White 012	Snow White
● White 013	Ivory
● White 014	Matterhorn White
● White 015	Off White
● Black 111	Black
● Blue 211	Mauritius Blue / Flag Blue
● Blue 212	Oxford Blue
● Blue 213	Lauderdale Blue
● Blue 214	Bondi Blue
● Green 311	Jade Mist Green
● Red 411	Rochelle Red

Varnishes

Use this guide to our varnish products to help you choose the perfect product for your project.



Gloss retention outperforms other leading varnish products*



	Perfection Plus	Schooner® Gold	Schooner®	Compass®	Goldspar® Satin	Original
Key attributes	<ul style="list-style-type: none"> Ultimate performance, clear, two-part polyurethane varnish Chemical cure for the hardest finish & highest abrasion resistance Superior gloss lasts four times longer than conventional one-part varnishes Professional-quality results made easy 2:1 mix ratio: Easy to measure and mix 	<ul style="list-style-type: none"> Advanced UV technology in our longest-lasting one-part varnish Exceptional deep gloss and colour are retained over the lifetime of the coating Sand between every other coat Traditional amber colour Designed for the experienced varnish enthusiast or professional 	<ul style="list-style-type: none"> Premium quality, traditional tung oil varnish with excellent UV protection Rich golden colour and deep gloss Good flow-out and self-leveling characteristics for easier application 	<ul style="list-style-type: none"> Fast-dry, high durability, polyurethane high gloss varnish Excellent resistance to abrasion, oils and chemicals Apply 2 coats per day, sand only after 2-3 coats Light amber colour Contains HALS and UV absorbers 	<ul style="list-style-type: none"> A satin finish polyurethane varnish for interior use Resistant to hot water, mild acids and alkalis Fast-dry formulation minimises dust contamination 	<ul style="list-style-type: none"> Traditional, general purpose gloss varnish Good flow, flexibility and gloss retention High clarity finish for light colour woods Interior, exterior and over existing varnish
Thinners	No. 9	No. 1 No. 3	No. 1 No. 3	No. 1 No. 3	No. 1 No. 3	No. 1 No. 3
Practical coverage (m² per litre)	12.0	12.9	14.3	12.9	10.3	11.7
Number of coats <small>Will vary depending on usage. Please check product label/data sheet.</small>	2-5	2-6	5-7	3-6	3	3
Suitable for use direct to oily timber (e.g. teak or iroko)						
Application method						
UV protection/Gloss retention					For interior use only	
Additive For a satin finish add:	Polyurethane Matting Additive	Matting Additive	Matting Additive	Matting Additive	—	Matting Additive

“Ever wondered how the professionals achieve a glass-like appearance to their varnished surfaces?”

When working with varnishes the final finish can be affected by the profile of the wood grain itself. A smoother finish will be achieved by increasing sanding preparation and the number of coats you apply. But, did you know that by using **International Clear Wood Sealer Fast Dry** under your varnish, this fast-drying, clear primer and surface sealer will fill and seal the wood grain, to provide an exceptionally smooth, crystal clear finish over which you can apply any of our high quality varnishes?



* Based on the results of our trials conducted in Florida.

BRUSH ROLLER SPRAY GOOD → OUTSTANDING

THE ECHO PROGRAM **Interested in the relative environmental impact* of your chosen product?** For more information go to echoprogram.com.
* When compared to the largest selling product in OUR range.

For a non-slip finish, use **Non-Slip Additive** with your chosen varnish.

Quick Reference Guide
Before You Start
Step-by-Step Project Guides
Antifouling
Topisides
Blister Repair and Prevention
The Echo Program
Colour Card

Woodskin®

Acts like a skin for your wood

Woodskin is a flexible wood oil/varnish hybrid that acts like a skin for your wood. Microporous properties allow Woodskin to breathe with your wood; tiny holes let the paint film expand and contract but are small enough to repel water – the cause of mould and mildew. Woodskin is very easy to apply; no need to thin or sand between coats. With good flow and levelling, Woodskin dries to a subtle, translucent sheen. Woodskin penetrates deep into your wood, leaving a thin surface film that will not crack or flake. Minimal maintenance requirements – simply clean and reapply season after season – the Natural Teak colour of Woodskin will showcase the beauty of any wood, including oily woods such as teak.



Features & benefits

- **Microporous wood oil/varnish hybrid**
– Flexible film expands and contracts with your wood; microporous, water-repellent properties prevent the cause of mould and mildew
- **Low viscosity penetrating formulation does not require thinning for application**
– Very easy to apply by brush, product flows-out over and into your wood; dries to a subtle sheen
- **No need to sand between coats; will not crack or flake**
– Minimal preparation and maintenance requirements both during and between applications
- **Formulated with translucent pigments**
– Translucent Natural Teak colour showcases the original beauty of any wood
- **Contains HALS and UV absorbers**
– Season-long resistance to UV degradation

Key attributes

- Practical coverage 10m²
- Minimum 3 coats
- Suitable for use on oily timbers

Application method



UV protection



Working with Fillers

Your boat is not only under attack from the elements. Damage can also result from collisions or other physical impacts. Watertite is a two-part water resistant filler, suitable for use with most common substrates. It can be used both above and below the waterline, filling up to 20mm in depth in one application.



Watertite

Key attributes

- Two-part, water resistant formulation
- Fill up to 20mm depth in one application

Substrate (after priming)



Suitable for above and below waterline













Coverage (m² per litre)

1.0 (at 1mm thick)

Undercoats

Use this guide to our undercoats to help you choose the perfect product for your project.



	Perfection Undercoat	Pre-Kote
Key attributes	<ul style="list-style-type: none"> ■ High performance two-part polyurethane undercoat ■ Provides an excellent base for a long-lasting gloss finish ■ Easy application, fast drying and easy sanding ■ Semi-gloss appearance 	<ul style="list-style-type: none"> ■ Undercoat for one-part finishes ■ Excellent opacity allows for easy colour changing ■ Long-lasting, easy to apply and rub down ■ Long overcoating times allow coat-on-coat application
Typically used	Under Perfection finish Do not use over one-part products	Under International one-part finishes Do not use under two-part products
Thinners	 No. 9	 No. 1
Practical coverage (m² per litre)	12.0	12.0
Number of coats	1-2	1-2
Substrates		
Application method		
Suitable for above waterline		
Suitable for below waterline		

* Over suitable primer



Primers

Use this guide to our primers to help you choose the perfect product for your project.



	Yacht Primer	Primocon®	Interprotect®	VC® Tar2	Gelshield® 200	Gelshield® Plus
Key attributes	<ul style="list-style-type: none"> Conventional one-part primer for use above the water Quick drying, with anticorrosive properties Pigments contain aluminium flake to provide an anti-corrosive protective barrier 	<ul style="list-style-type: none"> Conventional one-part primer for use below water Quick drying, with anticorrosive properties Can be used under all International® antifouling[†] or as a barrier coat over incompatible or unknown antifouling 	<ul style="list-style-type: none"> Quick drying, easy to apply, two-part epoxy primer Offers excellent anticorrosive protection Can be used as an antifouling tie-coat over existing epoxy primers 	<ul style="list-style-type: none"> Osmosis defence for GRP and anticorrosion barrier for metal Advanced self-levelling formulation requires no sanding between coats Smooth surface – ideal primer base for antifouling 	<ul style="list-style-type: none"> Quick drying, easy to apply, epoxy primer for protection of GRP against osmosis Provides protection against osmosis in five coats (250 µm) Useable down to 5°C Fast drying allows multiple coat application in a single day 	<ul style="list-style-type: none"> A high build, solventless epoxy primer Available in two colours to aid self-on-self application Contains no harmful solvents to migrate into the hull and cause reblistering
Typically used	Above water, under one-part undercoats Do not overcoat with two-part products	Below water, under International® antifouling or to seal unknown antifouling † Do not use with VC®17m systems	Where a high-performance anti-corrosive system is required Do not use over one-part products or antifouling	Under VC® antifouling, due to exceptionally smooth surface profile	To prevent osmotic blistering on fibreglass hulls and bilges	To treat osmotic blistering on fibreglass hulls
Thinners	No. 1	No. 3	No. 7	VC® General Thinner	No. 7	Do not thin under any circumstances
Practical coverage (m² per litre)	12.0	7.4	8.1	11.3	8.1	6.0
Number of coats	4	1-5	2-5	3-7	5-6	4
Substrates						Apply to hull after removing gelcoat
Application method						
Suitable for above waterline						Refer to product data sheet
Suitable for below waterline						

GRP
 WOOD
 STEEL
 ALUMINIUM
 LEAD
 ZINC
 BRUSH
 ROLLER
 SPRAY

For comprehensive application and scheme information, always read the **product data sheet** before you start.



Interested in the relative environmental impact* of your chosen product?

For more information go to echoprogram.com.

* When compared to the largest selling product in OUR range.

Health & safety

Providing health and safety precautions for paint products is a legal requirement and forms a specific section on our labels. However, the wording is laid down by law and is often difficult to understand. This section is intended to help you understand the information in our literature and on our product labels to make applying paint a safer job. Before starting work always read the label. Each tin will display a number of warning symbols and written warning phrases which will quickly indicate those areas where particular care should be taken. Other general safety precautions are detailed below and will help should any problem occur whilst using our paints.

Personal health

Avoid ingestion

Food and drink should not be prepared or consumed in areas where paint is stored or is being used. In cases of accidental paint ingestion seek immediate medical attention. Keep the patient at rest, do NOT induce vomiting.

Avoid inhalation

The inhalation of solvent vapour from paint, or dust from sanding, can be reduced by the provision of adequate ventilation or extraction. If this is not sufficient, or if specifically stated on the label, suitable respiratory protection should be used. Wear a cartridge type respirator when abrading old antifouling – never burn off or dry-sand antifouling as this may create harmful fumes or dust. In badly ventilated areas wear an air-fed hood or cartridge respirator with an organic vapour filter. Solvent fumes are heavier than air. Breathing these fumes can make you dizzy, feel drunk and headachy and could even result in collapse. Read the label carefully and ensure that the recommended protection is worn.



Risk of fire or explosion

Most paints contain organic solvents – some of which evaporate into the air upon opening the container. Any dangers can be reduced if a few simple precautions are taken:

- **Avoid naked flames** where paint is being stored, opened or applied
- **Do not smoke**
- **Store paint in a well-ventilated, dry place** away from sources of heat and direct sunlight
- **Keep the tin tightly closed**
- **Avoid sparks** from metals, electrical appliances being switched on and off, or faulty electrical connections
- **Do not leave paint soaked rags lying around**, in the pockets of overalls or in waste bins. **Some types of paint can dry out and auto-ignite.**

Avoid eye contact

Eye protection should be used during paint application and when there is any risk of paint splashing on the face. Safety glasses or goggles are inexpensive, available from many DIY stores, and are well worth wearing. Use eyewear that complies with EN 166. If material does contaminate the eye, it is recommended that the eye is flushed with clean fresh water for at least 15 minutes, holding the eyelids apart, and medical attention sought.

Avoid skin contact

Skin irritation can occur from contact with paint products. You should, therefore, always wear protective gloves and protective clothing when applying or mixing any paint products. Overalls, which cover the body, arms and legs, should be worn. Skin cream, of a non-greasy barrier type, may be used on the face. Do NOT use petroleum jelly as this can help the absorption of paint into the body. Remove rings and watch straps before commencing work, as these can trap paint particles next to the skin. Remove any paint that does get onto the skin by washing with warm water and soap or an approved skin cleanser. After washing, apply a skin conditioner. Never use solvent or thinners to clean the skin.

How to prepare bare substrates

All surfaces should be thoroughly degreased and free from any sanding debris prior to the application of any paint to the surface.

Aluminium

Degrease with solvent or Super Cleaner. Sand well using 60-120 grade (aluminium compatible) paper. Clean thoroughly and allow to dry. Prime using an International primer as soon as possible (within 8 hours) following the product recommendations provided in the paint systems guides.

Lead

Degrease with solvent or Super Cleaner. Sand well using 120 grade paper or power wire brush. Clean thoroughly and allow to dry. Prime using an International or VC primer following the product recommendations provided in the paint systems guides.

Zinc/Galvanised Steel

Degrease with solvent or Super Cleaner. Sand well using 60-120 grade paper. Clean thoroughly and allow to dry completely. Prime using an International or VC primer following the product recommendations provided in the paint systems guides.

Steel

Degrease with solvent or Super Cleaner. Grit blast to Sa 2.5 – near white metal surface. If grit blasting is not possible, grind the metal surface with 24-36 grade abrasive discs to a uniform, clean, bright metal surface with a 50-75 micron anchor pattern. Use angle grinder on small areas. Clean thoroughly and allow to dry completely. Prime using an International or VC primer following the product recommendations provided in the paint systems guides.

Stainless Steel

Light grit blast to produce a profile of 50 microns, clean thoroughly and allow to dry completely prior to application of an International primer following the product recommendations provided in the paint systems guides.

Bronze

Clean thoroughly and abrade to bright metal using 80 grade paper. Take care when abrading bronze

propellers, as excessive abrading can alter the profile of the propeller causing it to be out of balance. Clean thoroughly and allow to dry completely before applying products recommended for application direct to bronze (see paint systems guides).

Cast Iron

Degrease with solvent or Super Cleaner. Grit blast to Sa 2.5. If grit blasting is not possible, grind the metal surface with 24-36 grade abrasive discs to a uniform clean surface with a 50-75 micron anchor pattern. Use an angle grinder on small areas or a wire brush, prepare to a minimum St.3 according to ISO8501-1. Clean thoroughly with solvent and allow to dry completely. Ensure that all evidence of corrosion (e.g. iron oxide and iron sulphide) is removed prior to the application of an International or VC primer, following the product recommendations provided in the paint systems guides.

Fibreglass

Degrease with solvent or Super Cleaner. Sand well using 180-220 grade paper. Clean thoroughly and allow to dry completely. Prime using an International or VC primer following the product recommendations provided in the paint systems guides.

Bare Wood/Plywood

Sand smooth with 80-180 grade paper and then 280 grade paper. Remove sanding dust by brushing or dusting. Wipe down thoroughly with solvent and allow to dry completely, to ensure any residual sanding dust is removed, before applying products recommended for application direct to wood (see paint systems guides).

Oily woods e.g. teak

Ensure that the surface is thoroughly degreased using a recommended solvent to ensure all oils are removed. Sand smooth with 80-180 grade paper and then 280 grade paper. Remove sanding dust by wiping with solvent, to ensure any residual dust is removed. Ensure the surface is completely dry before applying products recommended for application direct to wood (see paint systems guides).

Always check the weather!

When painting outside, always check what weather conditions are anticipated during the preparation, application and drying phases of any project. Should fair weather prevail, whether or not to commence painting will then depend on the air and surface temperatures, humidity and dew point.

You may find the following hints and tips helpful when planning your project – further, product-specific guidelines can be found on individual product labels and data sheets.


Sharon Sheerin
Specialist in Primers Development




General Guidance Notes:

- Dew point is important when applying paint to a surface, as the evaporation of the solvent from the paint draws heat and/or energy from that surface, cooling it down. If conditions are right condensation may form on the surface of the paint resulting in various problems.
- Relative humidity is important as air can only hold so much water or solvent vapour at any one time. So, as the relative humidity increases, the level of solvent vapour the air can hold reduces, meaning paint will effectively dry more slowly.
- Air and substrate temperature will affect the drying properties of any paint. Failing to observe the recommended drying times can result in coating failure, including improper drying, wrinkling and loss of adhesion.
- Always avoid extreme air or temperature conditions; International products are tested across a range of temperatures, to ascertain the drying times and application characteristics of each product. Drying time recommendations are provided on our products labels; further information relating to weather considerations can be found on our product data sheets, available on our web site.
- Low temperatures will increase drying times; always check the 'through-dry' of each interim coat, before sanding or overcoating.

- Sanding too early can cause the paint to wrinkle under the sand paper, in some cases even tearing or gouging into the paint film making refurbishment difficult. Sanding before the paint film is 'through-dry' can also block the sand paper, meaning more sheets are needed to complete the task.
- Overcoating too early can cause wrinkling, blistering and loss of gloss in the finished paint job.
- High temperatures will reduce drying times, but can make application more difficult, as product flow and levelling can be compromised – particularly when applying finishes or varnishes. Where appropriate, thinning recommendations to help with higher temperature application are provided on labels and data sheet.


 When applying two-part products in higher temperatures the pot life of the product will also be affected, reducing your work time window.

- Do not paint in direct sunlight, or when the substrate itself is excessively warm, as the residual heat of the substrate can adversely affect the application and drying properties of any paint product; this can result in poor flow and levelling, rapid drying, cracking and loss of gloss. Surface temperature can be measured using a surface thermometer.

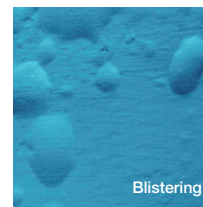
 Remember that surfaces heat up and cool down at a different rate to the surrounding air temperature, meaning even though the ambient temperature might seem warm, the temperature of the surface being worked on may still be quite cold. Very often one side of a boat will be in the shade and the other in bright sunlight meaning the application conditions will differ. Additionally, in the morning the surface temperature of the sunny side will generally be lower than the ambient temperature, whereas in the afternoon it may be higher.

Key points to note when applying finishes and varnishes:

- Dry, well ventilated conditions are preferable when applying finishes or varnishes. Whilst gentle air movement will assist the drying process, a dust-free environment is critical to achieving a good quality gloss finish; always avoid painting in windy conditions.

 Choosing a faster drying product or scheme, where available, will help to minimise the window for dust contamination.

- The effects of dust contamination may be further reduced by sanding lightly between each coat, removing residual dust by wiping down with a suitable solvent and allowing to dry before applying the next coat. This will also help improve the initial aesthetics.
- Avoid applying two-part finishes or varnishes late in the afternoon or when relative humidity exceeds 80% as these products are particularly sensitive to moisture. Condensation during application or due to overnight ambient temperature changes can affect the chemical cure of these products resulting in loss of gloss.
- When painting or varnishing timber avoid applying if the ambient temperature is increasing (or predicted to increase) significantly.



This is because rising temperatures cause timber to expand, which can lead to blisters forming in the paint or varnish film. A good tip is to apply when the temperature is falling, as the timber will better absorb the paint or varnish, giving better overall results.

Key points to note when applying epoxies (e.g. Watertite, Interprotect®, Gelshield® Plus)

- Whilst curing in high humidity conditions, particularly at lower temperatures, epoxies can develop an 'amine bloom' on the surface. This slightly sticky substance must be removed and can normally be washed off with a mild detergent. If it is not removed it can lead to the de-lamination of subsequent coats. Failure to remove the bloom will also make sanding more difficult.



- High humidity conditions can reduce the amount of solvent evaporation during the drying/curing stages; with epoxies this can lead to a 'soft cure'. As epoxy-based materials are generally applied at a higher film thickness, solvent can remain trapped in the film for many days leading to slow or poor final cure.
- Although epoxies generally cure well in most conditions, when the temperature falls to 7°C or below, curing can slow or even stop. Remember to check both day and overnight temperatures whether working outdoors or in a shed.
- Epoxy products usually respond well to a little heat; on cold days introducing a safe form of heating into the application area is well worth considering.

Making small repairs to GRP surfaces

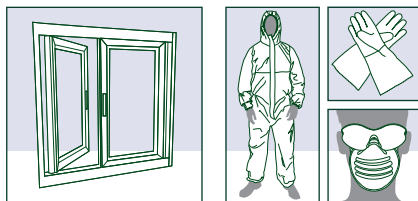
When working with fillers it's important to remember that epoxy fillers are recommended for both above and below the water areas; polyester fillers are suitable for use above the water only. International Watertite is a two-part epoxy filler, suited to most DIY repairs above and below water.



Stuart Jordan
Specialist in Epoxies/Fillers Development

1 Health and Safety

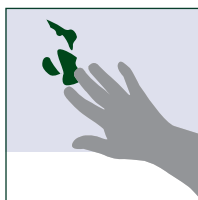
Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a face mask.



➔ Before starting your project, **always check the weather conditions!** See Pages 18-19.

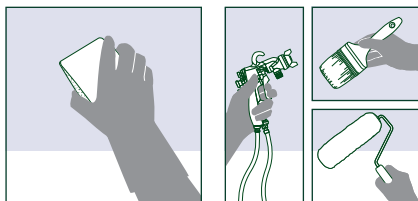
2 Inspection

Inspect for damage. Small repairs can be tackled easily, but any damage affecting a large area, or affecting the structure or hull integrity, should be referred to a professional for proper assessment.



3 Preparation and Priming

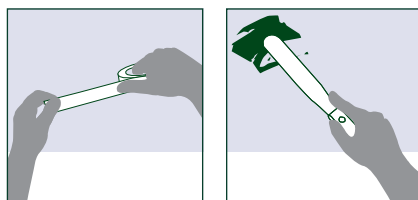
Remove any loose filler or gelcoat and abrade edges to remove loose material. Remove all debris and prime with an International or VC® primer, according to the scheme recommendations provided elsewhere in this guide. For an osmosis protection scheme use Gelshield® 200 or VC® Tar 2.



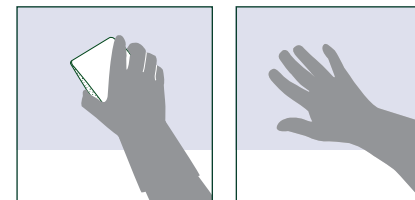
➔ See Pages 46-47 for information on osmosis treatment and prevention.

4 Applying the filler

Mask off the damaged area and apply Watertite using a palette knife or spatula. Allow to cure, following the recommendations provided on the product label.



Once cured, sand with 80-220 grade paper. The finished repair should be smooth and level with the surface. If required a second layer of filler may be applied, repeating the same process. The repaired area can then be primed, ready for painting.



➔ See Page 32 for sandpaper guidelines.

"Working with epoxy fillers?"

- Two-part epoxy fillers are the most widely used fillers in the yachting industry. They are invariably solvent free. A benefit of being solvent free is that they do not attack the underlying primer.
- Epoxies must be mixed in the proper ratio. Too much curing agent and they will leave a sticky film on the surface that is not suitable for overcoating. Too little curing agent will weaken the filler and cause it to crumble later on.
- Below the waterline, epoxy fillers must be used. Polyester fillers should not be used as they have a greater propensity to absorb water.

Removing aged finishes or varnishes

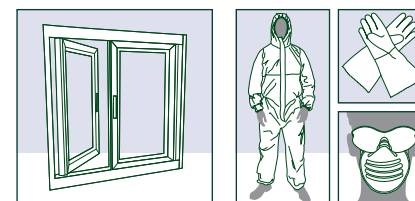
When preparing a surface previously painted with a finish or varnish scheme it may be necessary to remove the aged product, back to bare substrate. This will be required if the existing coating is in poor condition or if you're intending to apply a two-part product onto a surface previously painted with a one-part finish or varnish.



Gaven Johnson
Specialist in Retail Finishes Development

1 Health and Safety

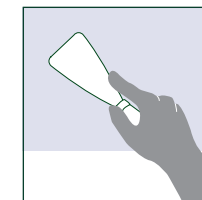
Before commencing work ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a dust mask.



➔ Before starting your project, **always check the weather conditions!** See Pages 18-19.

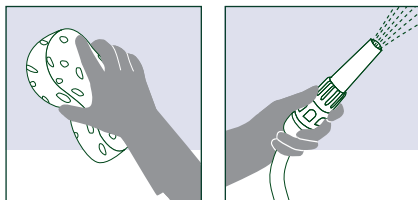
2 Inspection

Inspect for damage. Small repairs can be tackled easily, but any damage affecting a large area, or affecting the structure or hull integrity, should be referred to a professional for proper assessment.



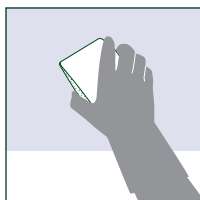
3 Cleaning

Clean the surface with Super Cleaner and rinse with fresh water to remove any polish, wax or contaminants.



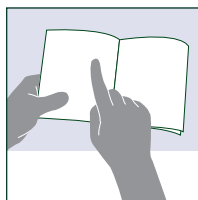
4 Removing aged finish

Abrade using 60-120 grade paper, removing as much of the paint or varnish as possible.



5 Preparation

Prepare according to substrate, following bare substrate preparation guidelines.



➔ See Page 17 for bare substrate preparation guidelines.

"Hints to help you achieve a perfect finish."

- We do not recommend using a chemical paint stripper when working with fibreglass as this may cause damage to the substrate.
- When working with wood, always work in the direction of the grain, whether sanding or applying varnish. This will avoid scratches that can still show through, even after many coats of paint or varnish.

Removing antifouling

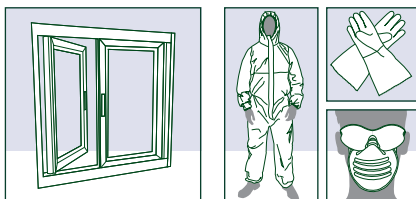
If your existing antifouling is in poor condition, we recommend removing it completely before repainting. Interstrip AF has been formulated for removing antifouling from all substrates and is safe to use on glass fibre without harming the gelcoat.



Julie Gent
Specialist in Antifouling Development

1 Health and Safety

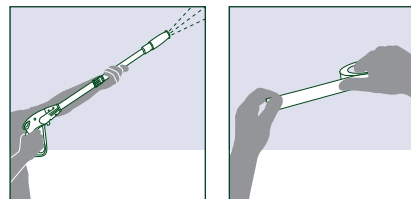
Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask or a respirator (if working on larger areas or in confined spaces).



Before starting your project, always check the weather conditions! See Pages 18-19.

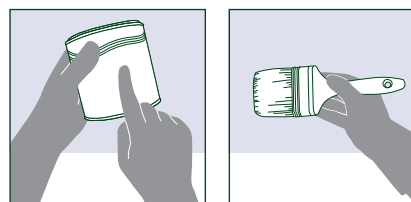
2 Preparation

High pressure fresh water wash, to remove loose antifouling; ensuring all residue and wash water is contained and disposed of, according to local legislation. Mask off areas to be stripped.



3 Applying Interstrip

Apply Interstrip AF liberally, using an old brush, following the application guidelines provided on the product label.



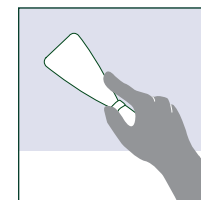
Leave on the surface. The product needs time to work; the time needed will vary depending on the temperature and the amount of old antifouling on the hull.



For best results, work on a small area at a time – do not allow the product to dry out. See product label for more information.

4 Removing old antifouling

Remove while still soft with a blunt scraper. Interstrip AF can remove several coats at a time, but heavy build-up may require more than one application. Residue should be disposed of according to local legislation. Reapply fresh antifouling after sanding and priming the hull.



See Page 32 for antifouling application advice.



"Is your existing antifouling in good condition?"

If your existing antifouling is in good condition, it may not need removing and can simply be overcoated, following a high pressure fresh water wash. Always ensure you check for compatibility before applying new antifouling; incompatible or unknown antifouling should be sealed with Primocon®. See Page 36 for more information on antifouling compatibility.

Applying finishes

Before starting any painting project consider the 3 most critical questions:

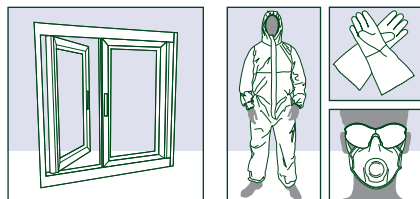
- 1) What preparation is necessary
- 2) Does the substrate matter and
- 3) What repair and upkeep is needed. Page 42 of this guide will provide this information and help you choose the best product for your project.

Neil Nicolson
Specialist in Finishes Development



1 Health and Safety

Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask.



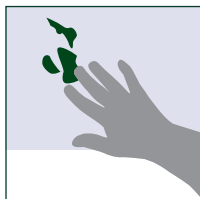
➔ Before starting your project, **always check the weather conditions!** See Pages 18-19.

i For health and safety reasons, two-part polyurethane products should only be spray applied by a professional applicator.

Previously painted surfaces:

2 Inspection

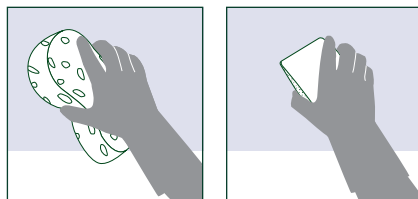
Check for areas of damage, separation or peeling, or any other indications that the existing coating is not firmly adhered to the substrate.



3 Preparation

In good condition

Clean with Super Cleaner to ensure any residual polish, wax or surface contaminants are removed. Rinse with fresh water and allow to dry. Sand smooth with 280-320 grade paper. Clean thoroughly and allow to dry completely. Continue at Step 6.



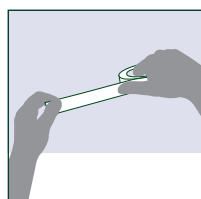
In poor condition

If previous finish is cracking, peeling or showing signs of separation from the substrate this should be totally removed.

➔ See Page 21 for advice on removing existing finishes.

4 Masking

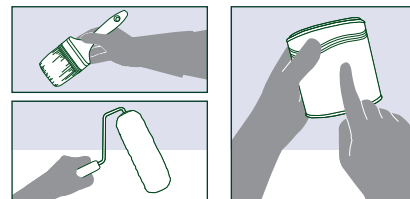
Before priming/undercoating, mask off the area to be painted.



Bare substrate:

5 Priming

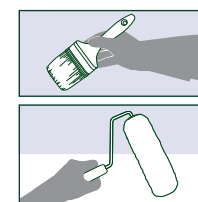
Bare substrates should be primed to promote good adhesion and provide a smooth even surface, prior to undercoating. Your choice of primer will be dictated by the substrate; product recommendations are provided on labels and data sheets. Remember to pay particular attention to drying times and overcoating intervals.



i Due to the porous nature of aged gelcoats, the risk of moisture or solvent entrapment – leading to blisters – is increased; applying Interprotect followed by Perfection Undercoat can reduce this risk and seal the gelcoat, prior to applying the finish.

6 Undercoating

Primed or previously painted surfaces should be undercoated. An undercoat will provide additional depth of colour and improve the durability and film build of the overall paint system. International offers two undercoats for use with its finishes range.

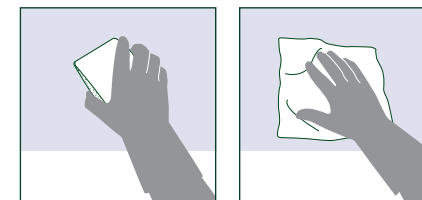


➔ See Pages 42-43 for undercoat recommendations.

i Mixing the second coat of undercoat 50:50 with the topcoat will produce a satin effect, which will highlight any imperfections (to be sanded smooth) as well as improving the gloss and depth of colour of the finish.

7 Application

Sand the undercoat smooth with 320-400 grade paper and remove dust with a wipe or tack rag.



Apply the finish, according to label recommendations.

“Achieve a perfect result every time!”

- Ensure an even spread by holding the brush at 45° – this minimises brush marks.
- The best finish is achieved on large areas by two people, one to apply the paint, the other following immediately behind to ‘tip off’ the finish.
- Clean or change brushes every 20 minutes or so. Always use lint-free cleaning cloths.
- Stir the can occasionally during the work.
- Dampen the ground with water before commencing painting to avoid any dust rising.
- Use a worn brush for the final coat, this will ensure less brush marks.
- Painting is best achieved on warm, dry mornings – cold weather retards drying and damp will spoil the gloss.
- Never apply direct from the can as this will introduce contamination.
- Always pour the amount of paint that you expect to use into a separate container.

Painting your bilge

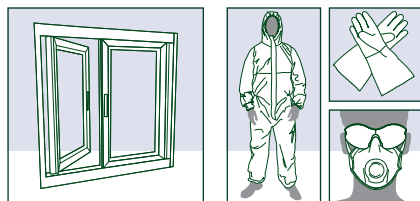
A freshly painted bilge is much easier to wipe down and keep clean, reducing the risk of odours that may result from unwanted residue. A clean bilge will also make it easier to find small parts or fastenings, which may have been dropped whilst working on your engine or other equipment.

Emil Langiewicz
Technical Support



1 Health and Safety

Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask or a respirator (if working in confined spaces).

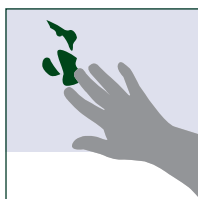


➔ Before starting your project, **always check the weather conditions!** See Pages 18-19.

Previously painted surfaces:

2 Inspection

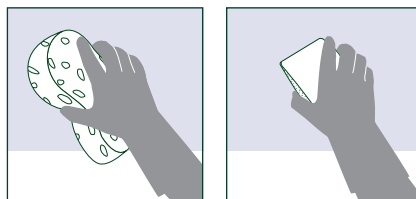
Check for areas of damage, separation or peeling, or any other indications that the existing coating is not firmly adhered to the substrate.



3 Preparation

In good condition

Clean with Super Cleaner and rinse with fresh water. Allow to dry. Sand smooth with 280-320 grade paper. Clean thoroughly and allow to dry completely. Continue at Step 5.



In poor condition

If previous finish is cracking, peeling or showing signs of separation from the substrate this should be totally removed.

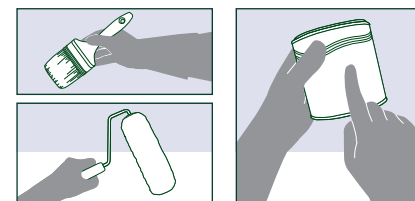
➔ See Page 21 for advice on removing existing finishes.



Bare substrate:

4 Priming

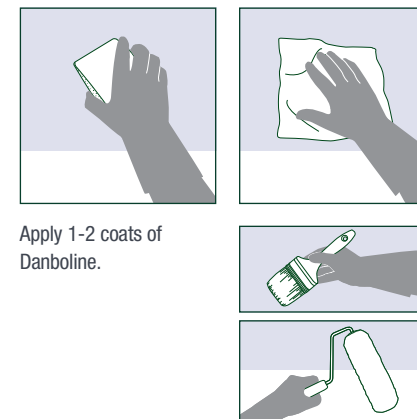
Bare substrates should be primed to promote good adhesion and provide a smooth even surface, prior to applying Danboline. Your choice of primer will be dictated by the substrate; product recommendations are provided on labels and data sheets. Remember to pay particular attention to drying times and overcoating intervals.



i Pay particular attention if the substrate is the reverse side of moulded GRP – this does not need to be primed.

5 Application

Sand the undercoat smooth with 180-280 grade paper and remove dust with a wipe or tack rag.



Apply 1-2 coats of Danboline.

i For added protection against moisture absorption and osmosis in bilge areas, use International Gelsield products – prior to applying Danboline – always follow the label instructions.

Preparing a non-slip deck

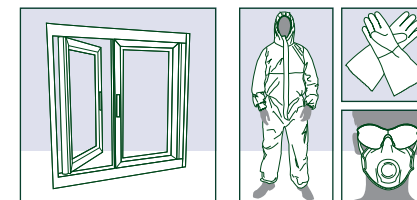
A deck demands a tough coating to protect it from everyday wear and tear. Where a non-slip surface is required International offers 3 alternative solutions.

Elodie Leonardi
Specialist in Retail Finishes Development



1 Health and Safety

Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask.

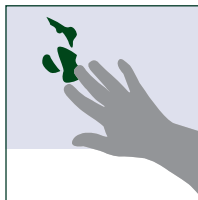


➔ Before starting your project, **always check the weather conditions!** See Pages 18-19.

Previously painted surfaces:

2 Inspection

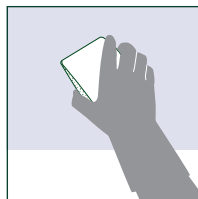
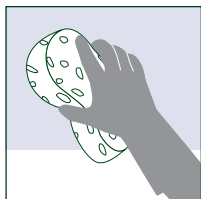
Check for areas of damage, separation or peeling, or any other indications that the existing coating is not firmly adhered to the substrate.



3 Preparation

In good condition

Clean with Super Cleaner, rinse with fresh water and allow to dry. Sand smooth with 280-320 grade paper. Clean thoroughly and allow to dry completely. Continue at Step 6.



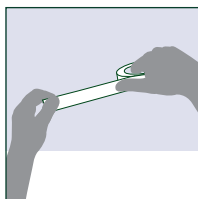
In poor condition

If previous finish is cracking, peeling or showing signs of separation from the substrate this should be totally removed.

➔ See Page 21 for advice on removing existing finishes.

4 Masking

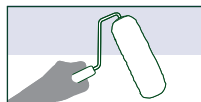
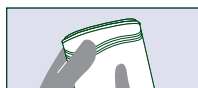
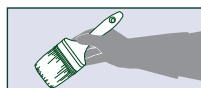
Before priming/undercoating, mask off the area to be painted.



Bare substrate:

5 Priming

Your choice of primer will be determined by the substrate and the choice of deck finish product. Priming recommendations are provided on labels and data sheets. Remember to pay particular attention to drying times and overcoating intervals.



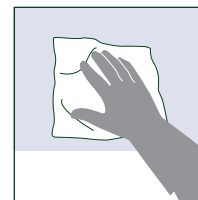
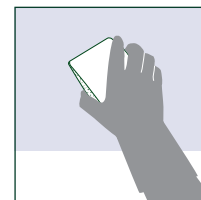
i Due to the porous nature of aged gelcoats, the risk of moisture or solvent entrapment – leading to blisters – is increased; applying Interprotect followed by Perfection Undercoat can reduce this risk and seal the gelcoat, prior to applying the finish.



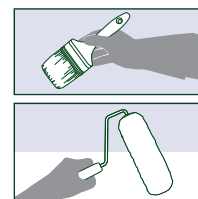
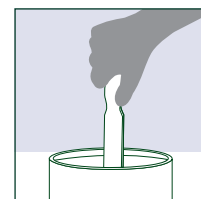
Using Interdeck (ready-mixed formula):

6 Application

Sand the primer (if used) with 180-220 grade wet or dry paper. Remove dust with a dust wipe or tack rag, according to label recommendations.



Mix Interdeck thoroughly; apply 1-2 coats. For best results either stipple by brush or use a mohair roller.

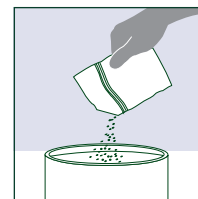
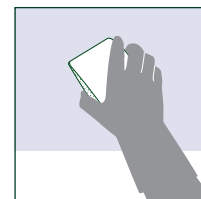


Using Non-Slip Additive with International® Toplac® or Perfection (hand-mixed method):

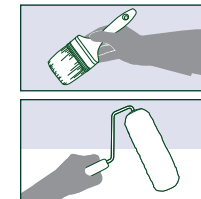
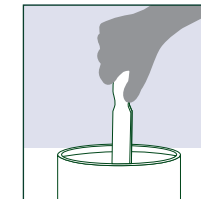
7 Application

Choose your paint system – see Pages 42-43 of this guide. Apply primer (if required) and undercoat following label recommendations.

Add the contents of the Non-Slip Additive sachet to International Perfection or Toplac®.



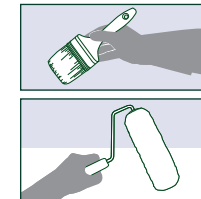
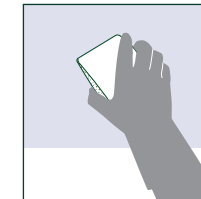
Mix thoroughly. Apply 1-2 coats to deck area, using a brush or roller. For best results either stipple by brush or use a mohair roller.



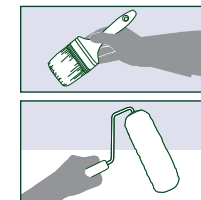
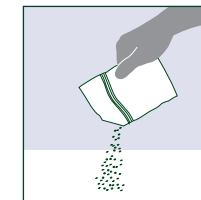
Using Non-Slip Additive with International® Toplac® or Perfection (broadcast method):

8 Application

Choose your paint system – see Pages 42-43 of this guide. Apply primer (if required) and undercoat following label recommendations.



Apply one coat of topcoat. While the paint is still wet, sprinkle Non-Slip Additive over the surface. Allow to dry thoroughly following the recommendations provided on the finish label. Remove excess grit. Apply second coat of finish.



Applying varnishes

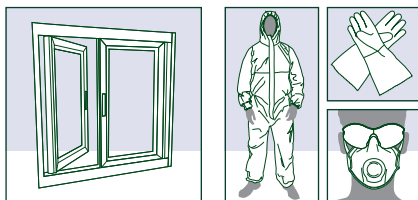
To achieve a professional result from any varnish project, thorough preparation is critical. If applying on to a previously varnished surface, the condition of the existing coating and its compatibility with the new varnish product should thoroughly checked before commencing any preparatory or application work.

Carole Hendriks
Specialist in Varnishes Development



1 Health and Safety

Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask.

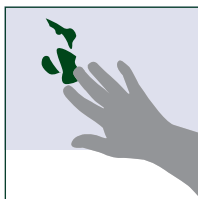


➔ Before starting your project, **always check the weather conditions!** See Pages 18-19.

Previously varnished surfaces:

2 Inspection

Check for areas of damage, separation or peeling, or any other indications that the existing coating is not firmly adhered to the substrate.



3 Preparation

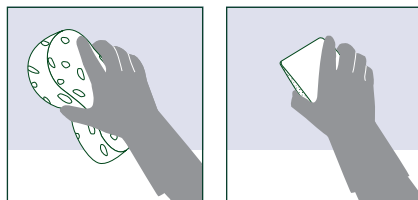
In good condition

Clean with thinners. Sand smooth with 280-320 grade paper. Remove sanding dust by brushing or

dusting. Wipe down thoroughly with solvent and allow to dry completely, to ensure any residual sanding dust is removed.

(Note: Small imperfections may be spot primed and sanded down prior to full varnish application.)

Continue at Step 6.



In poor condition

If previous varnish is cracking, peeling or showing signs of separation from the substrate this should be totally removed.

➔ See Page 21 for advice on removing existing varnishes.

Continue at Step 5.

Bare wood:

4 Preparation

Bare wood should be prepared following the appropriate bare substrate preparation guidelines.

➔ See Page 17 for substrate preparation guidelines.

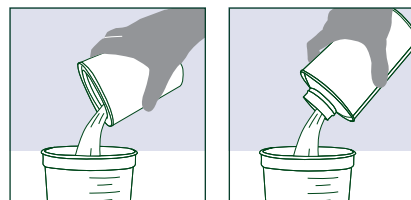
Continue at Step 5.



It is important to ensure all sanding residue is removed prior to varnishing, as this will impair adhesion and give a 'bitty' finish. Before commencing any varnish work, decant the amount of varnish you expect to use into a separate container, to avoid introducing contamination into the tin.

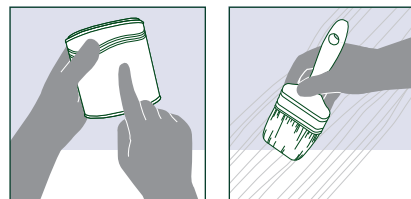
5 Priming

To promote penetration of the surface and the adhesion of subsequent coats; we recommend thinning the first coat of varnish. Decant the amount of varnish you expect to use into a separate container. Thin for priming according to label recommendations.



Apply 1-2 thinned coats of varnish following label recommendations.

Alternatively, prime using Clear Wood Sealer Fast Dry; a clear polyurethane primer with excellent grain filling properties that will improve overall scheme durability and aesthetics.



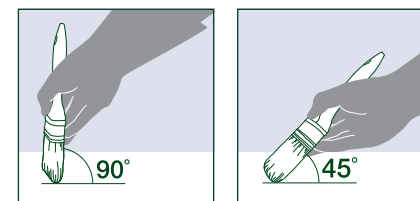
Always follow the scheme recommendations as specified on the label; this will indicate the minimum number of coats required and the sanding recommendations between coats. This information will vary depending on the product. To achieve long-lasting protection, you should plan to apply up to ten coats (depending on the system). As the number of coats increases, sanding between coats with a fine grade paper will increase the level of gloss and depth of lustre.

6 Application

Applying varnish with a brush is usually the best method, although roller application can be effective on large, flat surfaces.

Brush out, using firm strokes along and then across the grain, holding the brush at 90° to the surface.

Finally, 'tip off' by gently stroking surface with the brush at a 45° angle, following the grain. The brush you use should be used only for varnishing.



Sanding hints and tips

- Keep the sandpaper clean and change it frequently.
- Sand by numbers, finishing the surface with a progressively finer grade of paper.
- Varnishing is best achieved on warm, dry mornings – cold weather slows drying and damp spoils the gloss.
- Always use a clean brush, previously used only for varnish.
- Always buy the highest quality varnish and brush available. This will ensure you achieve the most attractive finish.
- Clean new brushes before use.
- Test the finish on a spare piece of wood before applying to the boat.
- On large areas use a foam roller to apply the initial coat, followed immediately behind with a wide brush for the finishing strokes – this is best done by two people.
- After cleaning with the correct thinners, wash the brush in detergent and warm water, dry and wrap in greaseproof paper in a fine chisel shape.
- Alternatively, having cleaned and washed the brush, suspend by its handle to avoid any 'fishtailing' of the bristle.
- As the varnish ages in the tin you may find there are lumps or contamination. Sieving the varnish into a separate container through cheesecloth, a paint filter or an old stocking is a good solution to this problem.
- Don't use varnish which has been open for a long period as it will have picked up dust.
- Do not varnish wood when exposed to direct sunlight.
- Never leave bare wood exposed too long as it will absorb moisture from the atmosphere.

Applying antifouling

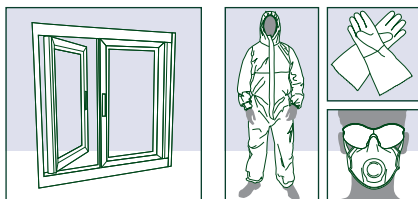
Antifouling can be applied using a brush or roller. Using a small roller is less work on the arm but takes longer to cover the surface area. If a brush is preferred, choose a large width brush; the finish will not be as smooth as a topside paint so the type of brush used is not critical.



Scott Thompson
Specialist in Antifouling Development

1 Health and Safety

Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask.

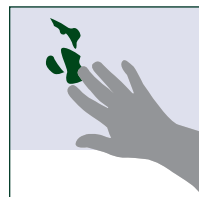


 Before starting your project, **always check the weather conditions!** See Pages 18-19.

Previously painted surfaces:

2 Inspection

Check for areas of damage, separation or peeling, or any other indications that the existing coating is not firmly adhered to the substrate.

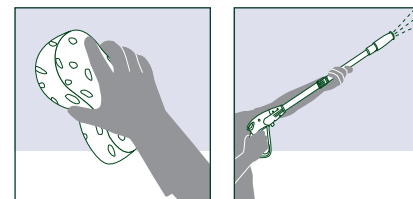


3 Preparation

In good condition

High pressure fresh water wash, to remove loose antifouling; ensuring all residue and wash water is contained and disposed of, according to local legislation. Allow to dry. Check for compatibility.

Continue at Step 5.



 See Page 36 to check **antifouling compatibility**.

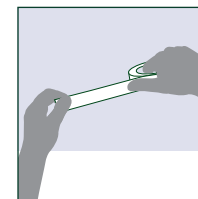
In poor condition

If existing antifouling is cracking, peeling or showing signs of detachment from the substrate this should be totally removed.

 See Page 22 for advice on **removing existing antifoulings**.

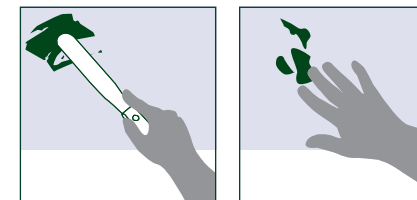
4 Masking

Before priming or applying antifouling, mask off the area to be painted.

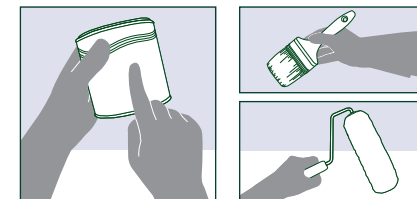



5 Repair/Priming

Repair damage with Watertite Epoxy Filler where necessary. Inspect GRP for gelcoat damage and signs of osmosis – treat accordingly.



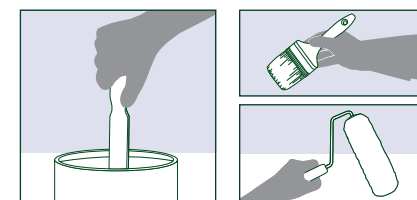
Seal incompatible or unknown antifouling with Primocon®. Bare substrates should be primed, according to substrate. Product recommendations are provided on labels and data sheets. Remember to pay particular attention to drying times and overcoating intervals.



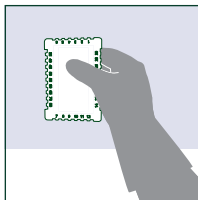
 See Page 47 for advice on **osmosis treatment**. See Page 20 for advice on **repairing GRP**.

6 Application

Mix paint thoroughly with a stirring stick, ensuring that any settlement is mixed in. Apply according to label recommendations, using a brush or roller.

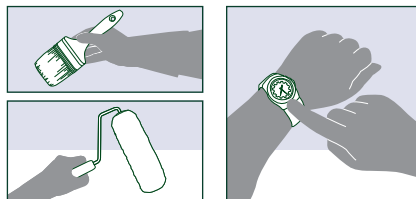


Apply the antifouling at the correct thickness; this may mean an extra coat is needed, depending on application methods and conditions.



Apply an extra coat to leading and trailing edges; e.g. waterline, trim tabs, outdrives, keels and rudders. These areas experience more water turbulence and so more wear on the paint surface.

Follow overcoating times and immersion times carefully. Failure to do this could result in detachment, blistering or cracking of the antifouling. The marine environment is harsh for paint so it must be allowed to dry thoroughly before immersion.



"Remember your PPE!"

Most antifouling contains biocides so should be handled with care; ensure the correct personal protective equipment (PPE) is worn at all times.

Painting outdrives, stern gear, propellers and keels

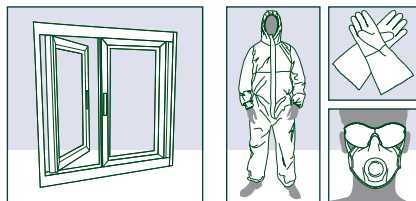
Outdrives and stern gear are usually constructed from aluminium. Propellers are usually bronze or aluminium. Keels are typically cast iron or lead. It's important to choose an antifouling that is hard, durable and suitable for these high wear areas and also one that is compatible with the substrate you are painting.

Roger Bolton
UK Sales and Marketing Team



1 Health and Safety

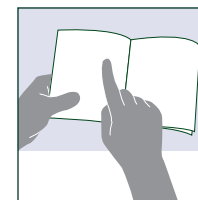
Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask.



➔ Before starting your project, **always check the weather conditions!** See Pages 18-19.

2 Preparation

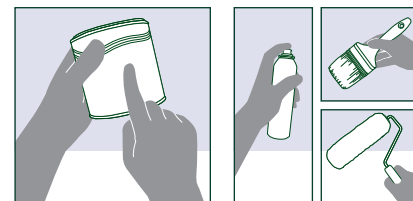
The key to protecting your underwater metals from corrosion is correct preparation of the substrate and choosing the best priming solution for your project. Before commencing any preparation, it is important to establish the type of metal you are working with.



➔ Once you've confirmed your substrate see **Page 17** for **substrate preparation information** and follow this advice carefully.

3 Priming

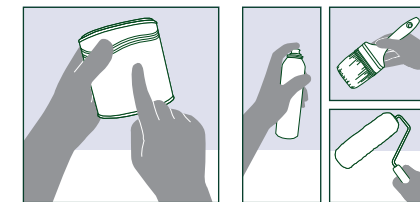
Apply a primer recommended for the selected antifouling and substrate; always follow the recommendations given on the product label.



➔ See **Page 41** for **primer recommendations**.

4 Applying antifouling

Apply the selected antifouling, following the label recommendations on film thickness, overcoating and immersion times carefully.



➔ Not all antifouling are suitable for application to bronze and aluminium, so it's important to **check compatibility** when selecting which antifouling product to use. See **Pages 04-06** for **antifouling product information**.

"Take care with zinc anodes!"

Care should be taken not to paint zinc anodes, which are often located next to the prop shafts, as this will seriously reduce their effectiveness. When painting your outdrives, underwater metals and keels, the longevity of any antifouling is difficult to predict as coating adhesion can be an issue, particularly on propellers. Thorough surface preparation is critical to promote good adhesion between the substrate and the coating.



Is my new antifouling compatible?

Once you've identified the International antifouling that's most suitable, if you have an existing coating on your hull you will need to establish the compatibility of the two products. Use this simple table to check compatibility between International® antifouling and also with competitor products.

	New Antifouling											
	Micron® Optima	Micron® Extra 2	Cruiser® Uno EU	Cruiser® Bright White	Boatguard EU	Interspeed Ultra 2	Trilux 33	VC® Offshore EU	VC® 17m Extra	Trilux Prop-O-Drev		
Existing Antifouling (in Good Condition)	Micron® Optima	●	●	●	●	●	●	●	●	●	●	●
	Micron® Extra											
	Micron® Extra 2											
	Cruiser® Uno	●	●	●	●	●	●	●	●	●	●	●
	Cruiser® Uno EU											
	Boatguard EU											
	Bottomcoat											
	Navigator	●	●	●	●	●	●	●	●	●	●	●
	Trilux											
	Interspeed Ultra 2	●	●	●	●	●	●	●	●	●	●	●
	Cruiser® Bright White											
	Trilux 33											
	VC® Offshore	●	●	●	●	●	●	●	●	●	●	●
	VC® Offshore EU											
	VC®17m Extra	●	●	●	●	●	●	●	●	●	●	●
	Unkown Product	●	●	●	●	●	●	●	●	●	●	●
	Previous antifouling in poor condition	●	●	●	●	●	●	●	●	●	●	●
	Awlgrip® Awlstar Gold Label	●	●	●	●	●	●	●	●	●	●	●
	Hempel Tiger Extra	●	●	●	●	●	●	●	●	●	●	●
	Hempel Hard Racing											
Seajet Shogun	●	●	●	●	●	●	●	●	●	●	●	
Seajet Emperor												
Flag Cruising	●	●	●	●	●	●	●	●	●	●	●	
Flag Performance												
Jotun Mare Nostrum	●	●	●	●	●	●	●	●	●	●	●	

- Apply after a light wet sand. Wash with fresh water and allow to dry.
- Remove the antifouling using Interstrip AF. ➡ See **Removing antifouling** on Page 22.
- Apply a barrier coat of Primocon® before applying antifouling. ➡ See **Applying antifouling** on Page 32.

Interstrip AF

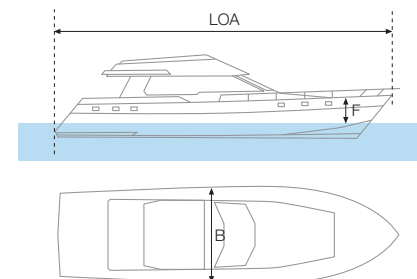
A paint stripper specially formulated for removing old or unknown antifouling without damaging the underlying substrate (including gelcoat).



How much antifouling paint do I need?

Use these following quick steps to calculate the amount of paint you need:

1. Work out the area to be painted using the appropriate formulation (below).
2. Divide the area by the coverage of the paint you've chosen to determine how many litres per coat you will need.
3. Multiply the litres per coat by the number of coats to give your total paint requirement.

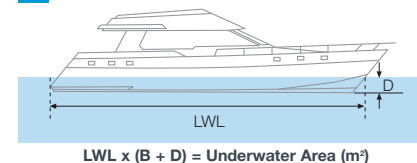


Important: If you own an aluminium boat, only apply antifouling paints specifically recommended for aluminium to prevent corrosion. **Never apply products containing Cuprous Oxide to aluminium.**

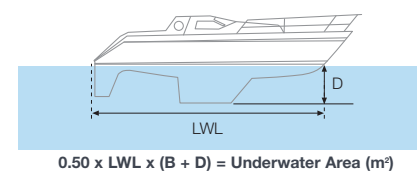
Top Tip
Apply an extra coat to all leading and trailing edges, water-line, trim-tabs, outdrives, keel and rudder. High turbulence in these areas tends to wear the antifouling faster.

Underwater area formulations

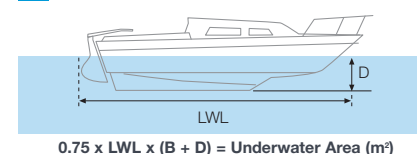
1 Full bodied craft



2 Fin keeled racing craft



3 Medium draft racing craft



Information

Abbreviations

- LOA = Length Overall
- LWL = Length Waterline
- B = Beam
- D = Draft
- F = Freeboard

Conversion Table

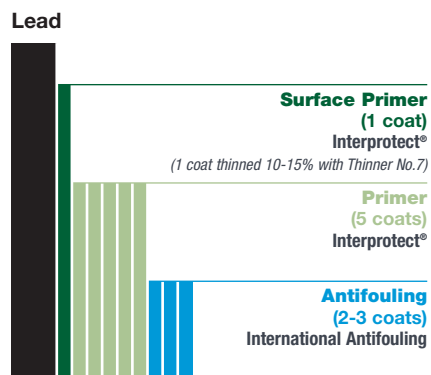
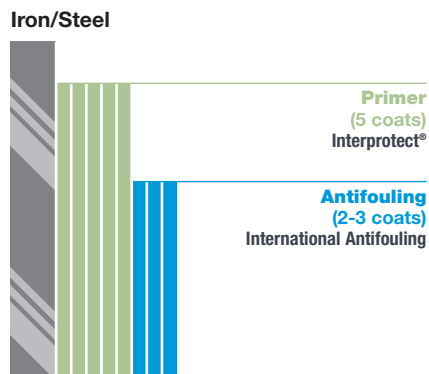
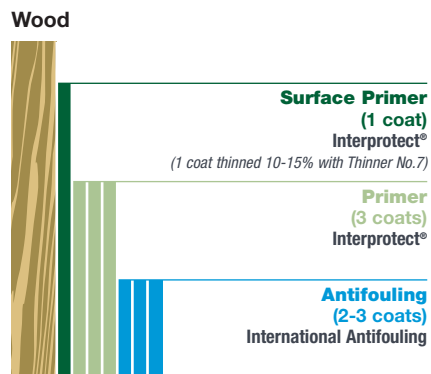
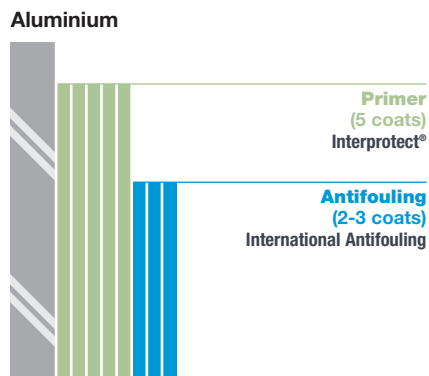
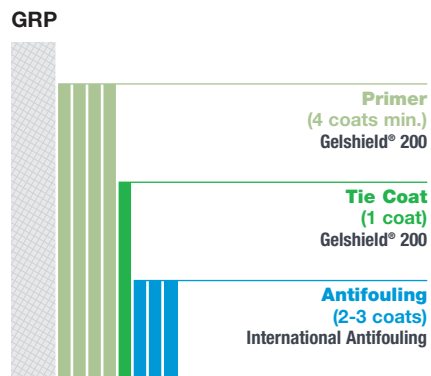
- 1 foot = 0.3 metres
- 1 metre = 3.281 feet
- 1 square foot = 0.093 square metres
- 1 square metre = 10.764 square feet
- 1 gallon = 4.546 litres
- 1 litre = 0.219 gallon

Top Tip
Always use the specified amount of antifouling. Under-application can result in premature fouling and costly mid-season haul out.

➡ For more information see the **Antifouling quick reference guide** on Page 04.

Below water schemes: two-part products

These schemes provide the maximum level of protection.



! Filler

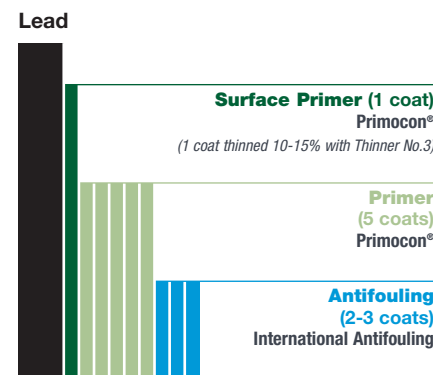
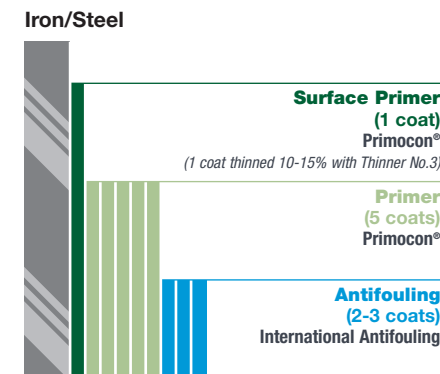
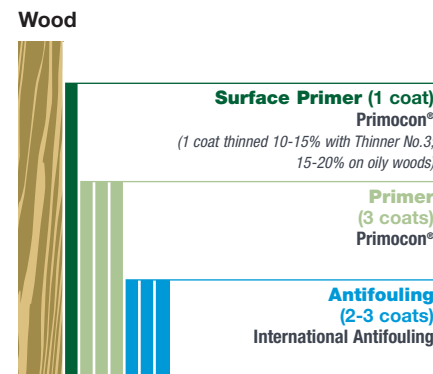
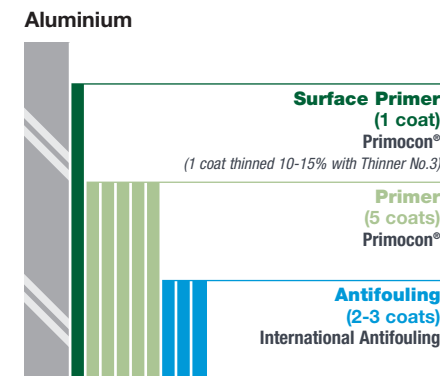
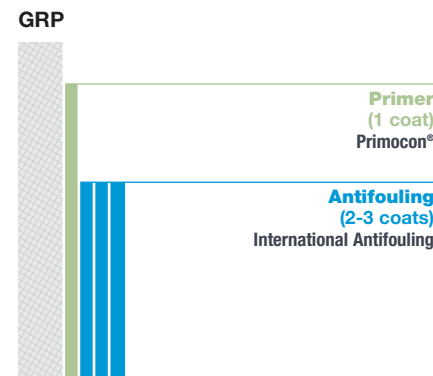
If required for small areas, Watertite Filler should be applied after the first coat of Gelshield 200 or Interprotect.

➔ See substrate preparation on Page 17.

! Important: If you own an aluminium boat, only apply antifouling paints specifically recommended for aluminium to prevent corrosion. **Never apply products containing Cuprous Oxide to aluminium.**

Below water schemes: one-part products

These schemes provide a good level of protection.



! Filler

If required for small areas, Watertite Filler should be applied between the first and second coats of Primer.

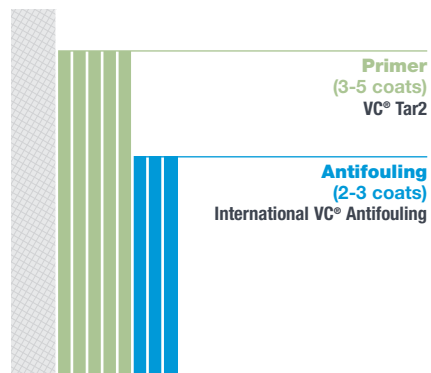
➔ See substrate preparation on Page 17.

! Important: If you own an aluminium boat, only apply antifouling paints specifically recommended for aluminium to prevent corrosion. **Never apply products containing Cuprous Oxide to aluminium.**

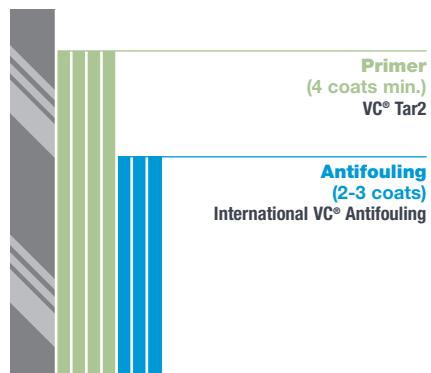
Below water schemes: VC® products

Use these schemes when using VC antifouling.

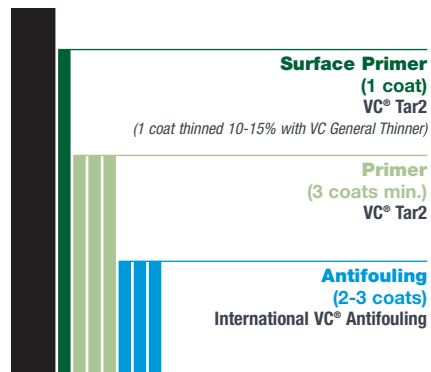
GRP



Iron/Steel



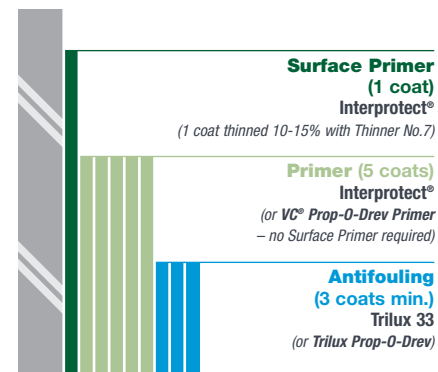
Lead



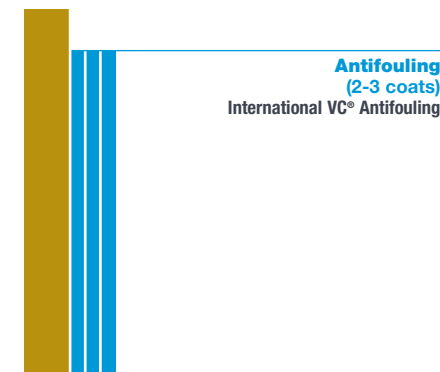
Propellers, outdrives and sterngear

Outdrives are built out of aluminium. This presents compatibility issues with cuprous-oxide containing antifouling. Propellers are typically made with aluminium, bronze or stainless steel.

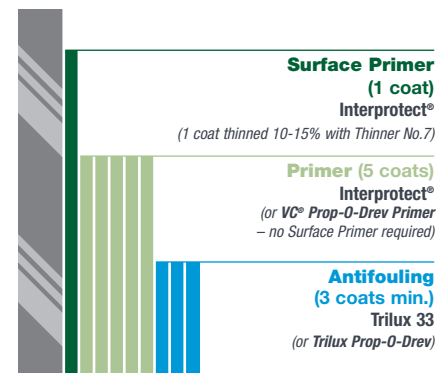
Aluminium



Bronze



Steel



➔ See substrate preparation on Page 17.
See osmosis protection schemes on Page 47.

➔ See Painting outdrives, stern gear, propellers and keels on Page 34.

Filler

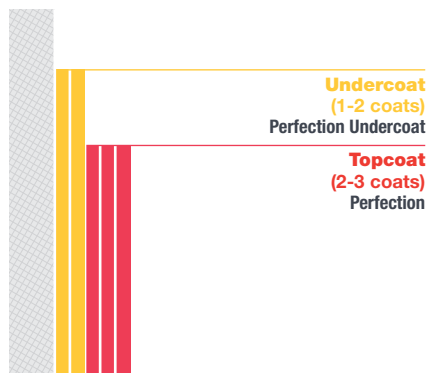
If required for small areas, Watertite Filler should be applied after the first coat of VC Tar2.



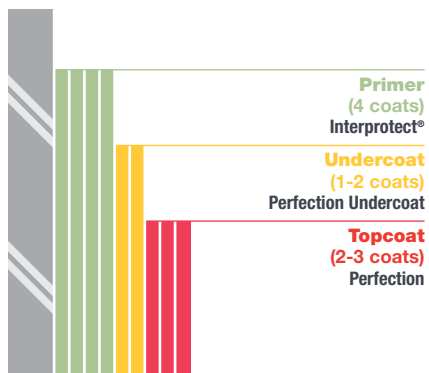
Two-part premium paint systems

These schemes provide the maximum level of protection available.

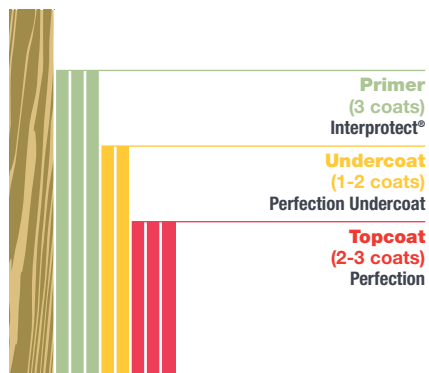
GRP



Aluminium

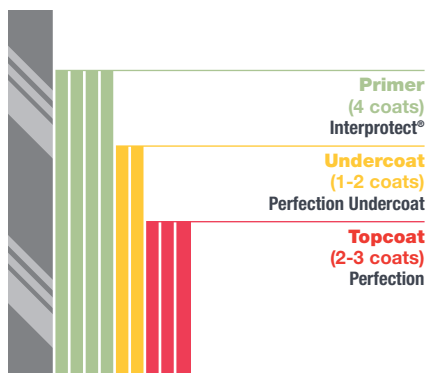


Wood



*or Clear Wood Sealer Fast Dry; 1 thinned + 3 full coats

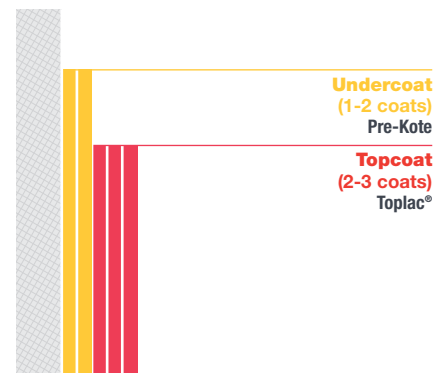
Steel



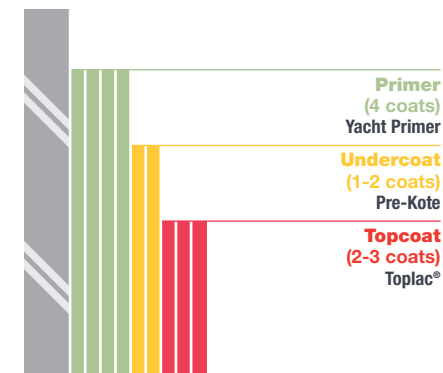
One-part conventional paint systems

These schemes provide a good level of protection.

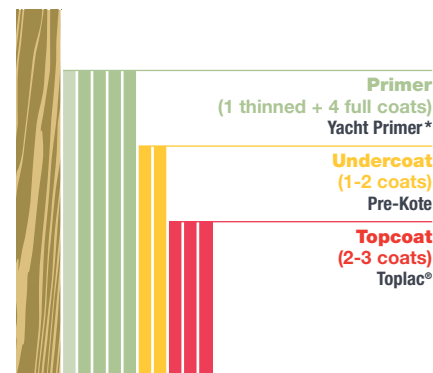
GRP



Aluminium

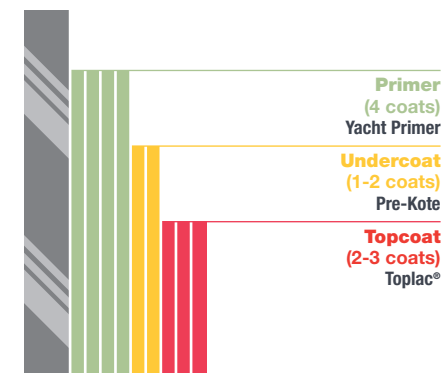


Wood



*or Clear Wood Sealer Fast Dry; 1 thinned + 3 full coats

Steel

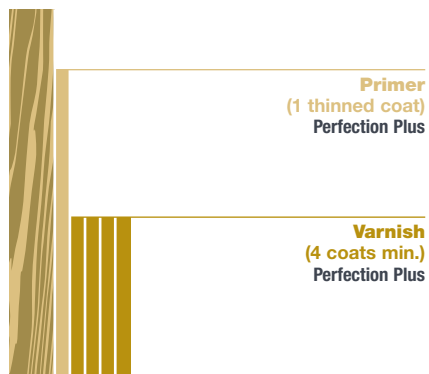


Filler

If required for small areas, Watertite Filler should be applied after the first coat of Primer.

Two-part premium varnish systems

Traditional bare wood system

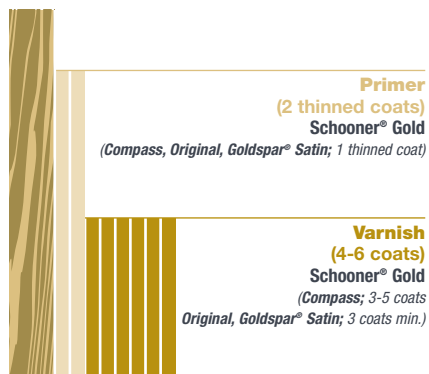


Reduced work time bare wood system



One part conventional varnish systems

Traditional bare wood system



Alternative bare wood system



i Oily woods

Hard woods such as Teak and Iroko, that are oily by nature, must be degreased adequately with the correct solvent prior to the application of a first thinned coat of varnish.



Boatcare

International Paint's new range of boatcare products work together in easy to use systems which will **CLEAN, RESTORE, PROTECT** and **MAINTAIN** gelcoat, painted surfaces and wood.

NEW!

CLEAN

SUPER CLEANER

- High strength formula removes dirt, oil, wax and grease
- Can be used diluted for general cleaning or undiluted for stubborn dirt



STAIN REMOVER

- Thick gel formula quickly removes tough stains
- Easy to use – no scrubbing required



RESTORE

LIQUID RUBBING

- Safely restores gelcoat and painted surfaces
- Removes scratches and oxidation ready for polishing



MARINE POLISH

- Fine graded polish for gelcoat and painted surfaces
- Creates a smooth, high gloss surface



TEAK RESTORER

- Cleans, and brightens teak and hardwoods
- Restores teak to its natural colour



PROTECT

POLISH AND WAX

- All in one formula for paint and gelcoat surfaces
- Contains abrasives and a wax which restores and protects in one quick and easy solution



MARINE WAX

- Protecting sealer for longer lasting gloss
- Produces a shiny, hard, dirt-repellent surface



UV WAX SEALER

- UV absorbing wax sealer for ultimate gloss protection
- Contains Ultra Violet (UV) absorbers which extend the lifetime of the wax



TEAK OIL

- Traditional Scandinavian formula
- Enhances and protects the natural beauty of teak and other hardwoods



MAINTAIN

BOAT SHAMPOO

- Mild universal cleaner which can be used on all surfaces
- Leaves surfaces clean and water repellent but won't remove waxes



Easy to use boatcare systems

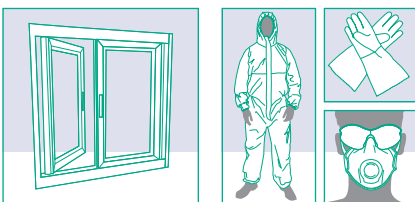
	CLEAN	RESTORE	PROTECT	MAINTAIN
Quick (3 Products)	SUPER CLEANER	POLISH AND WAX		BOAT SHAMPOO
Thorough (5 Products)	SUPER CLEANER	LIQUID RUBBING + MARINE POLISH	MARINE WAX	BOAT SHAMPOO
Ultimate (6 Products)	SUPER CLEANER + STAIN REMOVER*	LIQUID RUBBING + MARINE POLISH	UV WAX SEALER	BOAT SHAMPOO
Wood (3 Products)	SUPER CLEANER	TEAK RESTORER	TEAK OIL	

* IF REQUIRED

How to protect against osmosis

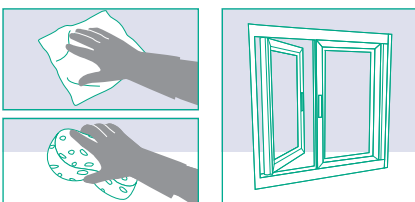
1 Health and Safety

Before commencing preparatory work, ensure the area you are working in is adequately ventilated. Ensure you are wearing the correct PPE; we recommend safety spectacles, goggles or visors, nitrile rubber gloves, overalls (ensuring skin is not exposed) and a solvent mask.



2 Preparation

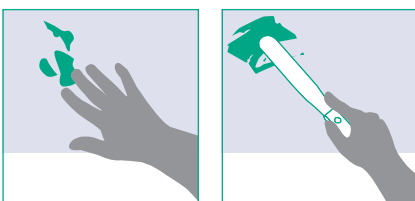
Degrease with solvent or Super Cleaner. Sand well using 180-220 grade paper. Clean thoroughly and allow to dry completely.



➔ If your hull is **new**, proceed to **Step 4**.

3 Inspection

Inspect the gelcoat for signs of damage or cracking. Small defects can be repaired with Watertite Epoxy Filler following the instructions on the product label.

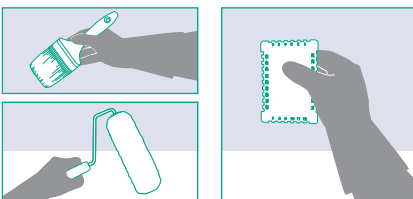


⚠ Look out for any warning signs that may suggest that water has entered the laminate or that osmosis may have occurred.

If more extensive damage is found or suspected we recommend that you seek the advice of a professional surveyor before continuing.

4 Application

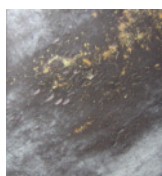
Apply Gelshield 200, building up to minimum dry film thickness of 250 microns (this will typically take around 5 coats) using a brush or roller. For ease, alternate between the grey and green shades, beginning and ending with grey.



Warning signs

Blisters

Blisters can vary from small pinhead blisters, to areas as large as the palm of a hand. The presence of any fluid behind a blister indicates a potential problem.



Star crazing

This effect can occur where the gelcoat is brittle. Fine cracks usually form due to severe flexing or impact damage, allowing water to seep into the laminate.



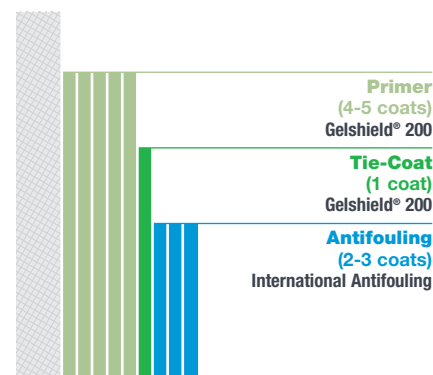
Pinholes

Tiny bubbles present in the gelcoat reduce its effectiveness and promote rapid water absorption.

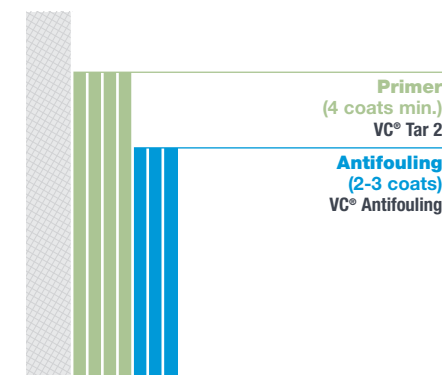


Osmosis protection schemes

GRP: International®



GRP: VC®



How to treat osmosis

1 Proper preparation of the gelcoat

This includes getting all of the antifouling paint and primers off and removal of as much gelcoat as necessary to get the hull dry (i.e. the entire gelcoat or just small areas). A professional, who has looked at your boat, should make this determination.

2 Drying of the hull

This is the most critical step in the process. If you do not get the hull dry it will re-blisters. We recommend a comprehensive washing and drying procedure.

3 Application of Gelshield® Plus

This solventless epoxy seals up the laminate and fills any cloth that has been voided of resin. It provides a water barrier to minimise the possibility of reoccurrence of damage. Contact our Technical Help Desk to obtain a copy of the Gelshield Plus booklet.

4 Application of Gelshield® 200

This will act as a tie-coat to the antifouling.

Gelshield® Plus

High build solventless epoxy for osmosis treatment

- A high build, solventless epoxy primer
- Available in two colours to aid self-on-self application
- Contains no harmful solvents to migrate into the hull and cause reblistering



Gelshield® 200

Epoxy primer for osmosis protection

- Quick drying, easy to apply, epoxy primer for protection of GRP against osmosis
- Provides protection against osmosis in five coats (250 µm)
- Useable down to 5°C
- Fast drying allows multiple coat application in a single day



THE ECHO PROGRAM

PAINT WITH THE ENVIRONMENT IN MIND

echoprogram.com

WHAT IS THE ECHO PROGRAM?

International have made a commitment, as part of the overall AkzoNobel commitment, to be a world leader in environmental issues; The Echo Program is this commitment.

WHY DO WE CARE?

Reducing our impact on the environment whilst continuing to supply products with superior performance will ensure a clean, safe environment for us all to enjoy our passion for boating – now and in the future.

THE SCOPE!

The Echo Program covers everything International are doing as a Yacht business to reduce our impact on the environment. You can find the full details at echoprogram.com.

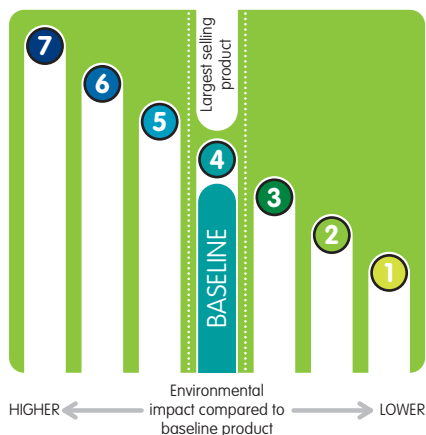
THE PRODUCTS?

To help those customers interested in selecting products from our range based on their relative overall environmental impact* we have assessed them all using the AkzoNobel-developed Environmental Scorecard tool.

This tool, unique and only available to International Paint Ltd. and our products, determines the environmental impact relative to a baseline product which is the largest volume selling product from our range in the category being looked at (e.g. Finishes, Primers, etc.).

We then convert this relative impact into an 'Echo Rating' as seen below. The lower the number, the lower the relative impact on the environment.

For more information go to echoprogram.com.



Our Scorecard tool and Echo Rating system are designed to give clarity and scientific credibility to how International assess and rank the environmental impact of our product ranges. Giving you, the customer, this clarity allows you to identify the most environmentally suitable product for you from our range*.

We are committed to the environment and this is our commitment to you.

* All ratings are relative to **OUR** largest selling product. No comparison can be made to products from other suppliers.



Roger Bolton, UK Sales Team

“Visit our website for even more expert advice.”

Our new look Boat Paint Guide & Colour Card has been designed with you – the customer – in mind, to make it as easy as possible to choose the right product for your project. If you'd like more information on our products, schemes, surface preparation or simply need some expert advice on painting and maintaining your boat, please visit our website. Check out our 'How To' guides for simple step-by-step information and handy hints and tips to ensure you achieve professional results, every time!

The answers are only a click away at yachtpaint.com




International Paint Ltd.

1 Wellington Park, Hedge End
Southampton, Hampshire SO30 2QU
Tel: +44 (0) 1489 77 50 50
Fax: +44 (0) 1489 78 58 67

Authorised Dealer:

Statements made in this brochure are advisory only and are not intended to be specific recommendations or warranties of any product, combination of products or fitness for any particular purpose. Please consult our product labels, product data sheets and/or material safety data sheets directly for complete technical information.

 International, the AkzoNobel logo and all product names mentioned in this publication are trademarks of AkzoNobel.

YXA941 © AkzoNobel 2014

Printed in the UK using vegetable oil and naturally occurring resin-based inks