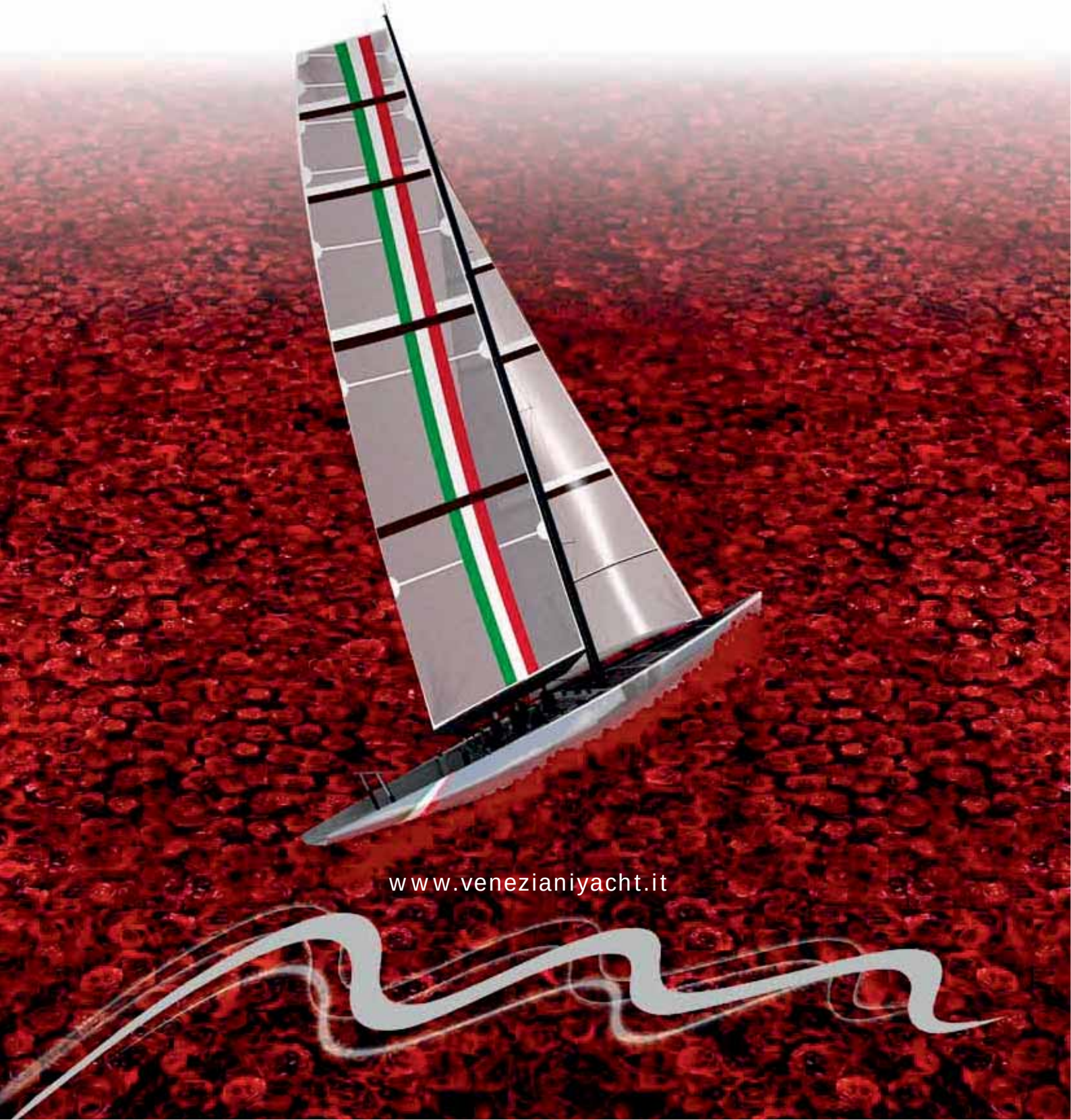
YACHTING Veneziani™

MAINTAINING YOUR BOAT

The complete guide to preparing, protecting and painting all types of boat.



www.venezianiyacht.it

MAINTAINING YOUR BOAT

How to prepare, protect and paint all types of boat.

The purpose of this manual is to help you to select the best way of protecting and embellishing your boat so that nothing is overlooked and no mistakes are made during the various painting steps.

The manual has been planned so that the information is immediately identifiable and the subjects are divided into different colour-coded sections for easy reference. By simply following the suggestions given and using your own experience you will be able to maintain your boat yourself, although in some cases you may find it easier to seek the help of a professional or a boatyard with more equipment. In this case you will find the manual useful in order to compare our suggestions (well known to the boatyard) with your own experience.

All Veneziani Yachting products have been developed to be applied directly, easily and safely.

"Maintaining Your Boat" is published by the Main Technical Department of Veneziani Yachting, taking into account the new technological developments as well as the experiences of all customers.

SPECIALIZED CENTERS

VENEZIANI YACHTING SALE CENTERS
These are available for additional information on products and application procedures.

AQUASTOP APPLICATION CENTERS

These are boatyards specialized in Aquastop application. They have a contractual agreement with Veneziani Yachting, are provided with the necessary equipment and have a staff with training for osmosis treatment.

Names, addresses and reference data are available at the website www.venezianiyacht.it

MAIN TECHNICAL DEPARTMENT

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1863

In Trieste, Giuseppe Moravia founds one of the first antifouling paint factories in the world and passes to his son-in-law, Gioachino Veneziani, his secret formula of "the plaster for protecting the hulls of ships".

1890

In Malta, Lord Muskerry admired Lloyd Austriaco's paints the hull of his yacht "Rita" using Veneziani paint. Others follow: the Archdukes Ludovico Salvatore and Carlo Stefano for their yachts "Nixe" and "Waturus", the King of Italy, his Majesty the Sultan, Sir Thomas Lipton for his Shamrocks, and many other yacht owners of the Edwardian age. Gioachino Veneziani is awarded a gold medal at the Vienna Universal Exhibition. Veneziani also wins awards at the Exhibitions of Trieste, Milan and Treviso.

1903

Veneziani founds the first antifouling factory outside Italy at Chathan in England. The work is managed by the son-in-law of the founder, Ettore Schmitz, better known in the literary world by his pseudonym Italo Svevo.

1932

The American Navy orders a large quantity of antifouling paint from Veneziani in order to study and to copy what was considered to be "the best underwater paint in the world

1976

From the new Veneziani laboratories in the Trieste industrial plant comes EVEN, the first self-polishing antifouling

1983

Veneziani becomes supplier and official sponsor of Azzurra, the first Italian challenger in the American Cup.

1991

Veneziani presents the first water-based paint stripper for boat hulls: AQUASTRIP.

1992

AQUASTOP Centers are created to prevent and treat osmosis.

2000

Veneziani launches the new two-pack antifoulings: EVEN EXTREME 2 and SPEEDY CARBONIUM.

2002

Veneziani improves the spray application properties of GEL GLOSS PRO in order to obtain better levelling and gloss with an outstanding exterior appearance.

2003

Veneziani launches RAFFAELLO: a new hydrophilic antifouling with carbon compounds.

2006

The new two-pack epoxy primer for antifoulings ADHERPOX is introduced. The Veneziani range of epoxy fillers is extended with a fast drying product: EPOMAST RAPIDO.

2008

Speedy Carbonium, the first antifouling with carbon technology, is now available with the new colours Blue Toned and Black together with the already existing Gray.

2011

Veneziani launches the polyacrylic enamel Commander with tintometric system.

2013

The new antifouling EVEN EXCEL SPC with an innovated self-polishing copolymer technology is born.

What paints are used for

Paint can be defined as a mixture of chemical compounds intended to form a film with sufficient mechanical and physical strength to protect the painted surface from external agents over time. Paint is used to protect and decorate.
Generally, these two requirements go hand in hand. In fact, painting to protect means the boat will be decorated and painting to decorate also implies its protection. Paint is used in almost all the phases of boat painting: preparation, priming, protection and finishing. Despite the fact that no paint is used in the preparation phase, getting the preparation right will affect the ultimate success of the job. Poor preparation usually means a disappointing result. The next step after preparation is to apply the primer. The primer protects the surface and also guarantees that successive protective layers and finishes will adhere to the surface, avoiding delamination.
After primer application, the undercoats provide a protective layer, which prevents water, humidity and atmospheric agents from coming into contact with the surface and causing it to deteriorate (metal will corrode, wood will rot and GRP will suffer from osmosis). A protective layer with a minimum thickness of 300-600 microns (when dry) for submerged parts and 250-350 microns for areas above the waterline is required to ensure sufficient protection.
The final step is to apply the finish. The finish is used to improve the appearance of the boat and enhance the surface (colour, gloss), or to provide specific protective properties (antifoulings).
For a perfect finish the surface may need filling in order to produce a smooth substrate. To achieve a good enamel finish, an undercoat is recommended, which provides a protective barrier and also a smooth surface, eliminating rough spots left by the filler.

What they contain

Paints have four main constituents: binders, solvents, additives and pigments.
Binders are the main constituent and are formed by polymers or resins which form a tough, dry film bonding the paint to the surface.
Solvents are volatile liquids used to dissolve and disperse the other components. At the same time, lowering the viscosity of the paint they make application easier. The solvent's evaporation controls the filming of the binder, allowing the formation of a uniform film which is why the correct use of thinners is important. For environmental and safety reasons the use of solvents is being reduced through the use of liquid resins.
Pigments are micronized powders which give the paint its colour, its hiding power and other special properties, such as pigments based on copper or zinc salts which have antifouling properties.
Additives are components which are added in small quantities to improve the properties of a paint (drying, resistance to ultraviolet light, ease of application, stability in the can, etc).

How they are classified

Painting products are subdivided into varnishes, paints and enamels. Varnish is transparent, mainly consists of binders, solvents and additives, but has no pigment. Paint contains both pigments and extenders. Paints are called enamels when they have particular characteristics such as gloss and resistance to weathering. Fillers are also paint products characterized by a high percentage of extenders so that they can be used to level cavities and imperfections in the surface. There is an important difference between one-pack and two-pack paints. One-pack paints are single components and the film is formed through evaporation of the solvent. Whilst these products are easier to apply, they have limited durability. Two-pack paints (A + B) require mixing to achieve a chemical cure and the right temperature and humidity must be maintained. Filming occurs by means of chemical cross-linking of the two components. This process produces longer durability and better protection.

How they are applied

When you are planning to paint, always remember the following indications which will enable you to paint safely without making mistakes:

- Mask the edges of the area to be painted using adhesive tape. Always remember to remove the tape immediately after the application of each coat, especially when you are using two-pack paints.
- Only thin as required using the recommended thinner.
- After opening the can, ensure that the paint is evenly mixed to attain an even consistency and colour, especially if the pigment (at the bottom) has separated from the binders (at the top).
- If you are using a two-pack paint it is important to mix the two components separately before pouring component B (hardener) into component A (base), and then mix until the colour is homogeneous. When you are preparing a two-pack paint, take into account how much paint you will be able to use before it becomes unusable (pot-life).
- Apply the paint at the recommended coverage and comply with the recommended drying times even if the paint appears to be dry.
- Apply the paint at a temperature of between 15 and 25°C and at an humidity of less than 75%. It is possible to work at higher or lower temperatures than these but you must expect the drying characteristics to change. Remember to take into account not only the temperature at the moment of application but for the entire drying period (overcoating time) and therefore, for example, also the temperature overnight.
- Never paint in full sunlight. If necessary, create a shaded areas using tarpaulins. Do not paint in strong winds or mist.
- Do not vary arbitrarily the ratio between the base and the hardener in two-pack paints or the chemical characteristics of the product will be changed.
- Despite their high standard of compatibility, Veneziani Yachting paints may not be compatible with the existing paint on the boat. If you are unsure of the paint previously used, we recommend that you paint a small test area first. Should any problems arise (cracking, bubbles, "bleeding", softening of the previous paint), please contact Veneziani Yachting. Normally, you simply need to apply a coat of suitable sealer.
- To check the evenness of the paint, use a paint thickness gauge at various points to measure "coat by coat" the thickness of the wet paint before the solvent evaporates. Compare the volume of dry paint: if this is 100%, the thickness when dry will be equal to that when wet; if this is 50%, the thickness will be half.

Glossary

THEORETICAL AND PRACTICAL COVERAGE

The coverage indicated in the technical data sheets refers to the theoretical coverage of the product. The theoretical coverage can be calculated using the following formula:

$$\text{Theoretical coverage } (m^2/L) = \frac{\%SV \times 10}{DFT\ (\mu m)}$$

When applying a paint, the covered surface is less than that one indicated in the theoretical coverage, since there is always some loss of material, the amount of loss depending on the surface's conditions, applications methods, or environmental ambient conditions.
Estimating the percentage of lost product, the practical coverage can be calculated as follows:

% Product loss	Loss factor
10%	0.9
15%	0.85
20%	0.8
25%	0.75
30%	0.7

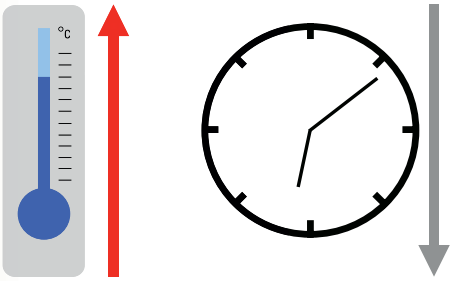
In order to obtain the practical coverage, the theoretical coverage must be multiplied by the loss factor.
When you purchase the products you have you know the m^2 to be painted and consult the technical data sheets in order to be able to calculate the necessary quantities.

SOLIDS BY VOLUME

This is the ratio between the solid and volatile substances in a paint product. The dry volume is the useful part of the product which forms the protective film. The solvent (the volatile part), which evaporates, facilitates the application of the product. The dry volume of a product can be used to calculate the theoretical coverage at a certain thickness. A product with a 50% solids by volume means that 100 cm3 must be applied (0.1 l) per m^2 to obtain a wet film 100 microns thick and a dry film 50 microns thick. In a product with a 100% dry volume (solvent-less) the wet and dry film thicknesses are the same.

POT LIFE

This is the time during which you can apply the A+B mixture (base + hardener) of a two-pack product after mixing. When this time has elapsed, the mixture sets and can no longer be applied. Any attempt to thin the product is pointless and dangerous. The pot life given in the technical instructions is measured at 20°C for 200 cm3 of product.
Please keep in mind, that the pot-life is temperature depending. At higher temperatures the pot-life diminishes, at lower temperatures the pot-life lasts longer. For example, if the pot-life of a product is 1 hour at 20°C, at 30° C it will be only 30 minutes.

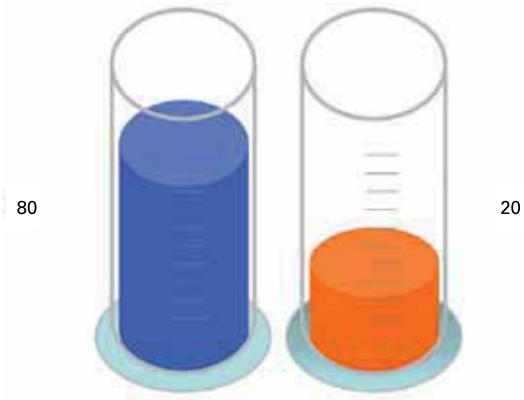


DRYING

There are two phases during the drying process of a product: solvent evaporation and/or the degree of cross-linking. A product is "powder" dry when any powder deposited on the film does not stick to the surface. A product is "touch" dry when it can be handled without the film being marked. The paint only achieves its maximum performance when the drying-time has completely elapsed (drying time before use). You should always comply with the recoat times given in the technical data sheets.

MIXING RATIO

This is the mixing ratio between the base (component A) and the hardener (component B) for two-pack products. The mixing ratio is reported both in weight and in volume in the technical data sheet for each product. You must pay careful attention to this information since these quantities cannot be changed . Remember that an excess of hardener will not accelerate the paint but will also affect its properties and quality.



THIXOTROPY

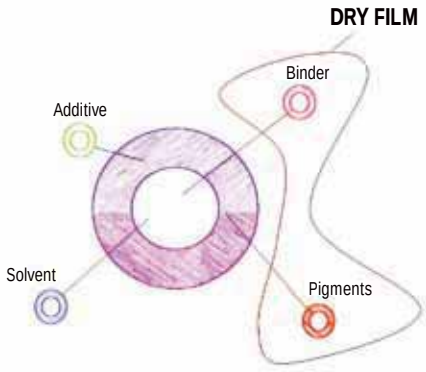
This is a form of apparent viscosity. A thixotropic product appears dense and viscous, while in reality it is easy to paint with a brush or roller. When it is energetically stirred, a thixotropic product returns to its normal viscosity becoming more liquid. In a thixotropic product, the pigments are not separated from the binders and therefore do not settle to the bottom of the can.
Application by brush or roller is easy and the product does not sag or run during application. However, it can become difficult level and has a tendency to leave marks when applied by a brush and orange peel when applied with a roller. This is why it is necessary to use small brushes with fine, long bristles and short pile rollers. The product should be stirred properly before application and if necessary, slightly thinned.

HYDROPHILIC

This is the opposite of hydrophobic. A hydrophobic surface repels water and does not become wet. A gloss enamel, glass, a surface treated with silicon or Teflon based products are all hydrophobic. However, a hydrophilic surface is easily wetted and incorporates or retains a layer of water. Hydrophilic antifoulings, by retaining a layer of water, reduce the friction of the hull. The friction between the layer of water retained and the seawater is less than that between seawater and a hydrophobic surface. By repelling water, the hydrophobic surface creates greater friction.
Moreover, a hydrophilic antifouling such as RAFFAELLO, repels fouling more effectively, because the layer of absorbed water enhances the leaching of biocides.

SPECIFIC WEIGHT

This can be defined simply as the weight of one liter of the product and is expressed in g/cm^3. Normally, the resins and the solvents of a paint have a specific weight equal to or less than 1, and therefore the same weight as water. Pigments, however, are heavier. Some pigments which are used in antifouling (copper compounds, for example) have a specific weight of 5.7. This is why cans of antifouling are so heavy. For this reason, pigments tend to settle on to the bottom of the can, a problem mitigated by using special additives.



POLYMERISATION

A polymer is a compound consisting of a high number of single molecules called monomers. Polymerization is the process in which two or more molecules combine to form a new molecule. Plastics are typical polymers: polyester, polypropylene, etc. In the case of varnishes and of oils (linseed oil, tung oil, etc.) polymerization is a natural process, which occurs by oxidation, promoted by the oxygen in the air.
The polymerization of two-pack paints is a chemical reaction, where the base and the hardener interact rapidly to form a highly cross-linked polymer. For this reason two-pack coatings usually have better chemical resistance than one-pack coatings.

PVC

Pigment Volume Concentration is the concentration by volume of the pigment in a dry film. Coatings with a high PVC, containing more pigments and extenders, are mat and have high hiding power. Coatings with lower PVC are glossy or semi-glossy and have better chemical and water resistance. PVC is a critical factor in hard antifoulings, which affects the leaching rate of the biocides.

Hygiene and Safety

There are a few basic safety and hygiene rules which shall be complied with whenever you are using paint.

- Carefully read the instructions printed on the can before starting to paint.
- Particularly, check the safety label for the precautions which must be taken for each product.
- If the necessary documentation is not available, please consult the website www.venezianiyacht.it.
- Certain paint components (particularly in antifouling) are irritant if touched, noxious if inhaled and sometimes are toxic. These dangers, which vary from product to product, are clearly indicated on the safety label by the appropriate symbols and with the related precautions.
- Do not smoke when painting.
- Don't use compressed air to clean your clothes, especially if solvents are present.
- Almost all paints contain flammable solvents which evaporate during drying. Be careful not to inhale the vapours, especially in a closed environment. Ensure adequate ventilation to avoid the accumulation of vapours and the risk of fire or explosion and use an appropriate mask.
- Always wear gloves, a mask and protective goggles.
- Always sand with wet sandpaper on a wet surface, particularly with antifouling, and wear gloves, a mask and protective goggles.
- Preferably the water-based paint stripper AQUASTRIP should be used to remove old paint. Dry sanding or flame cleaning should be used only where it is impossible to employ a different method.
- When you have finished, or during a break for refreshment, thoroughly wash your hands with soap and water or with a hand cleansing agent. Never use thinners or strippers based on solvents to wash your hands.

Labeling

The new labels introduced by Veneziani Yachting have been brought up to date in compliance with the EEC regulations and also with the purpose to make the application easier for the final user. For this reason, besides the general recommendations for the handling of products and indications of dangers, some pictograms, which are useful for the application, are shown.

These pictograms are not regulated by the EEC, however, being used by the majority of paint producers, they are recognized as international standards.
For instance, besides the explanation of the symbol, also the recommended percentage of thinner to be used, as well as the drying and recoat times are shown.

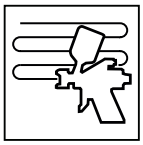
Here on the side, the pictograms, which shall be used in the summaries of the technical data sheets on the forthcoming pages are shown.

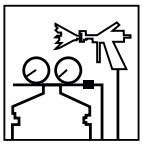
These short descriptions of the technical properties of the products will be useful when choosing a product for the desired application. However, prior to start the application of a coating system, the related technical data sheets should always be consulted.

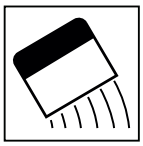
Besides the general pictograms regarding the application data, you will find also some special pictograms. Here below you can see some of these pictograms, indicating, for example, the content of solvent, the content of carbon or the compatibility with aluminum (for antifoulings) or products for professional use or products for regatta boats. These pictograms should be helpful for an evaluation of costs and benefits.

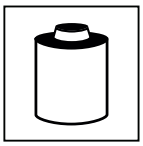

brush application

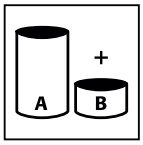

roller application


air spray application

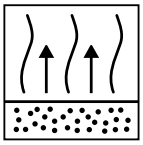

airless application


application with spatula

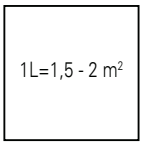

thinner



mixing ratio


recoat time


hard dry

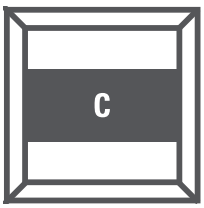


theoretical coverage

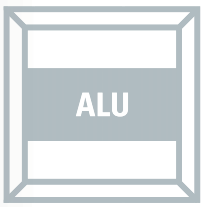
Solvent-free

Solvent-less

Water-based



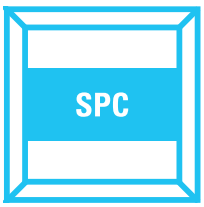
Carbon Technology



Suitable for aluminum polymer

Professional range

For racing boats



Self-polishing

SURFACE PREPARATION

When repainting your boat, you should carry out some preliminary steps to clean it and to ensure that any remaining layers of paint are still closely bound to the surface. If the old paint is deteriorating or delaminating, it should be removed completely or it will cost you more wasted time and money at a later date.

CLEANING AND INSPECTION

Follow the cleaning procedure here below:

- wash with fresh water, with a high pressure if possible, to thoroughly clean the whole surface;
- degrease all areas contaminated with oil or grease , using a sponge soaked in DETERSIL, and rinse. Check that the old layer of antifouling is well bonded;
- larger areas can be stripped with mechanical means such as scrapers or disc sanders - which are quite slow procedures - or with a portable heater - suitable only for one-pack coatings - or with chemical strippers.

For the removal of dust, use clean rags dampened with fresh water. Never use solvent. The application of AQUASTRIP makes the removal of several coats of antifouling possible.

Chemical strippers may be divided in two categories:

- Solvent based strippers are corrosive liquids, which in contact with skin may cause ulcers. These strippers, after application, should be removed as soon as the coating has been softened, otherwise the substrate could be damaged.
- Water based strippers are gels, which can be handled without risk or danger. These strippers require a longer reaction time, but have the same effectiveness as the previously mentioned ones. For GRP boats water based strippers should always be used.

STRIPPING
(Only for deteriorated surfaces)

To remove old, deteriorated antifoulings use AQUASTRIP, a water-based, biodegradable stripping gel, which does not damage gel coats or GRP, penetrates deeply into the coating layer and is effective on large surfaces, saving time and work.

AQUASTRIP has good stripping power also on one-pack primers, undercoats and finishes. Proper stripping is carried out as follows:

- Apply a wet coat with a thickness of 1 mm (about one 0,75 l can for 1 m², or one 5,0 l can for 6 - 7 m²);
- Let the stripper work for a few hours. The required time depends on the number of coats as well as on the temperature and the RH, since the stripper is only effective when wet.
- Remove the softened layer with a spatula. Often the removal can be carried out with high pressure water washing.
- Do not carry out stripping with strong wind or in bright sunlight, since the stripper - being water-based - can dry out without softening the coating. If there are several coats of antifouling, repeat the above mentioned procedure.

AQUASTRIP - Water based stripper for antifouling

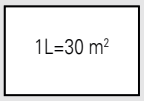
Ecological water based stripping gel with low enviromental impact solvents. Specifically formulated for removing old antifoulings from wood, GRP, steel and other metals. It has good stripping power also on one-pack primers, undercoats and finishes. Being water-based it does not damage gel coats or GRP and can be handled without harmor risk. Aquastrip requires longer softening time if compared to solvent based strippers, but is effective on large surfaces such as hulls applying one coat only without any danger for the boat, the operators and the environment. Aquastrip free from toxic or harmful components: does not contain N-methyl-2-pyrrolidone (NMP). Has a neutral pH and can be used indoors without requiring special ventilation. Caution: store between 5 to 35° C. Colour: light green. Packaging: 0,75/ 5,00 litres

water

1L=1,5 - 2 m^2

DETERSIL - Emulsifying detergent for silicones

Detersil is an emulsifying detergent for silicones. To obtain maximum adhesion of paint to GRP surfaces without having to sand the surface thoroughly, it is necessary to first remove any mould-release agents. Since these agents contain wax, paraffin or silicone, a specialy detergent product must be used. Detersil has a dissolving and emulsifying action and can be used whenever a surface has to be cleaned thoroughly before painting. Packaging: 1liter.



water

1L=30 m^2

SANDING

Always wet sand, which means wetting the surface and sandpaper first with water. This reduces the amount of dust produced (especially from the antifouling which can be dangerous).

Always wear a mask, gloves and goggles when sanding.
Areas with existing old paint should always be sanded prior to repainting.

Procedures for sanding are as follows:

- hull: sand with 80 grade sandpaper, always wet, and roughen the entire surface of the old antifouling, leaving the undercoat intact.
- topside: sand with 180-240 grade sandpaper. Before starting to paint, degrease well and remove all dust using a rag dampened with water and detergent. Never use solvents for degreasing.

Surface to be sanded	Dry paper grade	Wet paper grade
Wood	60 - 120	n/a
Iron and steel	60 - 120	n/a
Aluminum and light alloy	60 - 100	n/a
Aged gel coat before primer	80 - 120	240
Gel coat before primer for antifouling	180 - 220	320 - 400
Gel coat before topcoat	320 - 400	400 - 500
Painted surface	150 - 220	180 - 240
Varnished surface	220 - 240	320 - 400
Two-pack fillers	40 - 80	n/a
One-pack and knifing fillers	120 - 150	180 - 220
Barrier coats	180 - 220	n/a
Undercoats before topcoat	320 - 400	400 - 500
Topcoat to eliminate defects	1000 - 2000	2000 - 3000

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

PRIMER APPLICATION

In order to obtain good results and the best performance of a paint system, the surfaces preparation must be carried out properly. If you spend a little more time and effort during the preparation, you will be rewarded by better and longer lasting results. The surface preparation shall be completed by the application of a coat of primer. This primer will temporarily protect the surface and ensure better adhesion of the undercoat and finish.

GEL COAT

Degrease thoroughly and rinse well to eliminate traces of wax, paraffin, silicon or other substances, which could affect the adhesion of the coating system. Clean the surface with circular movements using a sponge soaked with DETERSIL, rinse with water and then lightly sand the surface. Apply a thin layer of ADHERGLASS, a one-pack adhesion primer, by brush.

As an alternative you can use ADHERPOX, a primer for antifouling with extended recoat time: up 3 months if recoated with an antifouling and unlimited if recoated by itself.

Grit-blasting and mechanical disc sanding are effective methods for surface cleaning, but may be dangerous if not carried out properly. We recommend to contact a professional operator.

STEEL, CAST IRON, LEAD

Grit blasting is the best method to remove rust and contaminations from metallic surfaces. With this method the surface is abraded by means of an air jet mixed with abrasive. The grit blasting outfit consists of an air compressor, from which the air flows to the abrasive container, from where the air jet, mixed with abrasive, is conveyed trough a hose to a blasting nozzle, hitting the surface to be cleaned.
Grit-blasting should be carried out only by professional operators. If grit blasting is not possible, use mechanical disc sanding with 36 grade abrasive discs in order to produce a silvery surface with a rough profile. Immediately afterwards apply one coat of ADHERPOX or UNIKOTE PRO.

LIGHT ALLOY AND ALUMINIUM

We recommend light grit blasting or mechanical disc sanding. Degrease the surfaces with DETERSIL, rinse well and apply ADHERPOX.
If later on any welding work has been carried out, the welds shall be also cleaned with the same procedure.

PROPELLERS, SHAFTS AND STERN DRIVES

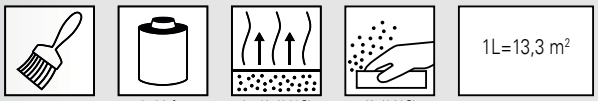
Remove all traces of old paint and oxides by sanding with grade 40-80 abrasive paper. Degrease with DETERSIL; never use solvents. After degreasing don't touch the surface with bare hands. Apply a thin coat of PROPELLER PRIMER or ADHERGLASS.

WOOD

The wood shall be dry (less than 18% humidity) clean and free of oil, grease and glue. Sand the entire surface with 60 -120 grade abrasive paper and remove the remaining dust with dry rags or pressurized air. As soon as possible, apply a primer specified for wood. You can choose between MINIAX PLX, a one-pack chlorinated rubber primer, and FIBRODUR, a two-pack polyurethane sealer for wood.
For the application, brush the primer along the direction of the wood fibers in order to improve the penetration into the fibers.
For FIBRODUR, let dry for 24 hours, then carry out light sanding before proceeding with the desired coating system.

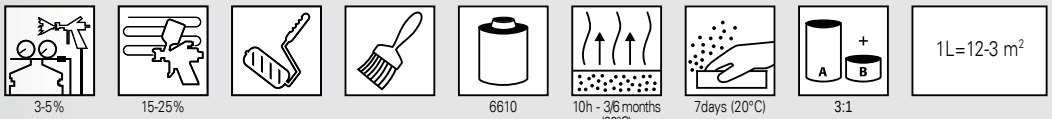
ADHERGLASS - Adhesion primer for GRP

Adherglass is a primer which is based on synthetic polymers. It is a one-pack primer providing good adhesion and suitable for use on gel coats, GRP and epoxies such as Epoway and Aquastop. Adherglass is quick-drying and is used principally as a primer for antifouling on GRP or on new or stripped gel coats. The surface does not require sanding to guarantee good adhesion, but must be thoroughly degreased. Colour: pink. Packaging: 0,75/ 5,00 litres.



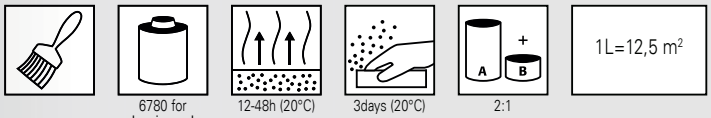
ADHERPOX - Primer epossidico bicomponente a lunga ricopertura

Modified two-pack epoxy primer suitable for boat-hulls but also recommended for topsides and superstructures. Adherpox has been formulated for all types of boat building materials (aluminium included). If several coats are applied, this primer provides good corrosion protection. Thanks to its high solids by volume Adherpox complies with VOC-regulations.A special feature of Adherpox is its extended recoating interval: 3 months when recoated with antifoulings and 6 months when recoated with an additional coat of Adherpox, without sanding. Colour: white. Packaging: 0,75/ 2,50 litres.



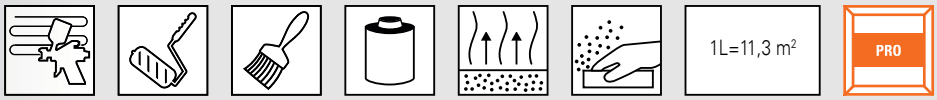
FIBRODUR - Sealing primer for wood

A two-pack polyurethane primer for wood with excellent sealing properties. It's deep penetration makes the surface highly impermeable and hard. This product is recommended for use mainly on new or stripped wood. When correctly applied in a single coat it does not form a film but penetrates into the surface. In colourless version it does not alter the original colour of the wood and does not yellow with age. This product can be painted over with a wide range of products such as Eurogel, Epoway, Resina 2000, Ticoprene, Timber Gloss, Wood Gloss, Wood Mat. Colour: clear, mahogany, nut-brown, teak. Packaging: 0,75 litres



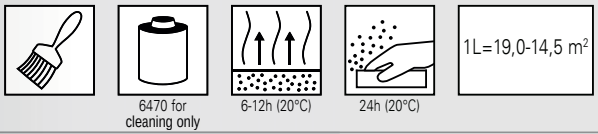
MINIAX PLX - One-pack anticorrosive primer

Primer for wood and steel based on a modified chlorinated rubber, combined with non-toxic compounds and antirust pigments. It is relatively slow drying characteristic and the nature of the resin gives it a high wetting power. Together with a suitable finish it will be resistant to submersion in both fresh and sea water. This product can be covered with a finish which is either alkyd or chlorinated rubber. Not resistant to aromatic solvents or hydrocarbons. Colour: light ochre red. Packaging: 0,75 / 2,50 litres.



PROPELLER PRIMER - Primer for propellers, shafts and stern-gear

A one-pack primer for Propeller antifouling, based on synthetic resins, which adheres well to metal and alloys in general. Especially formulated to provide the adhesion of the antifouling Propeller, it can be used for all underwater metal parts which need to be protected against fouling such as propellers, shafts, flaps, etc. An improved primer which is quick drying, has good anticorrosion properties and is easy to use. Colour: light grey. Packaging: 0,25 litres.



For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

FILLING

Filling eliminates porosities and imperfections on in the boat's surface, producing a smooth surface. The filler should always be applied on top of an undercoat or a primer and then be recoated with the desired coating system. Use a flexible filling knife, working on small areas at a time, or for larger areas use a filling board.

EPOXY FILLERS

These are solvent-free, highly resistant fillers, which can be used for two-pack systems on both immersed and non-immersed surfaces. These fillers should be applied at temperatures from 15 to 35° C, since at lower temperatures curing is very slow. At temperatures below 10° C epoxy fillers may not cure at all.
If the filling is carried out at low temperatures, it may be useful to pre-heat the containers (with hot air or warming the sealed cans in hot water) before mixing in order to make the product more fluid. Fillers should always be applied to substrates previously coated with epoxy primers after sanding with suitable grade paper and cleaning. Mix base and hardener until the colour is homogeneous. Apply with a spatula or a trowel without adding thinner. Apply a smooth layer avoiding to leave filler marks which would make sanding more difficult.

Epoxy fillers components shall be mixed together until the colour is homogeneous. Keep always a package of SUBCOAT S filler on board. It will be very useful, if an urgent repair is needed.

For filling limited areas use EPOMAST, suitable for any type of boat material. If several layers of EPOMAST are required, sanding between layers is recommended.
For leveling large areas, where ease of application and low weight is required in order to avoid an increase of the boat's weight, use EPOMAST EVO, a filler with low specific weight. Apply a smooth layer with a maximum thickness of 1 cm. Let dry for at least 24 hours (at 20° C) before sanding with 40 - 80 grade paper and proceeding with the coating system.
For leveling smaller areas, if application times are limited, use EPOMAST RAPIDO, a filler which can be sanded after only 3 hours. Apply a smooth layer with a maximum thickness of 1 cm for each pass. Let dry for 3 - 4 hours (at 20°C) before sanding with 120 - 180 paper.

For underwater applications only, if urgent repairs are required, use SUBCOAT S, a solvent-less, two-pack epoxy filler. Clean the area with a wire brush or scraper, removing all loose paint and rust. Mix the base and hardener thoroughly with hands kept wet continuously in a container or directly in the seawater. Even if the product is not harmful, always wear rubber gloves for the application. When mixing, knead first a small quantity of hardener (white paste), add the same quantity of base (blue paste), then mix with wet hands until the colour of the mixture is a homogeneous light blue.

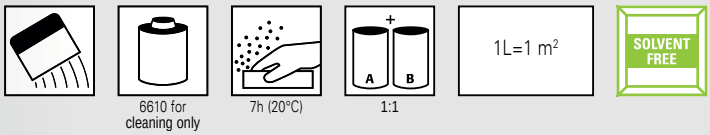
CONVENTIONAL FILLERS

STUCCO VELOX is suitable for conventional one-pack painting systems on wooden boats. To be used only above the waterline. Apply the product on top of enamels, such as ITALIA or UNIGLOSS or on top of undercoats, such as MINIAXPLX or EUROGEL, previously sanded with 80 - 120 grade paper.

When repainting aged coatings, first of all degrease and sand the surface before applying the filler with a flexible spatula and without adding thinner. Apply a uniform layer with a maximum thickness of 1 mm. Let dry for at least 24 hours before sanding with 120 - 180 grade paper.

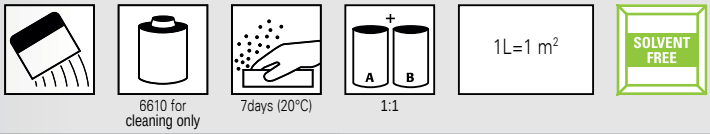
EPOMAST - General purpose epoxy filler

High-strength two-pack epoxy filler with great mechanical resistence. Excellent adherence to any type of surface and to epoxy primers. Highly resistant to water. Epomast can be used to make joints and can be used to repair heavily damaged surfaces. Thicknesses of up to 10 mm can be reconstructed using a spatula and Epomast can be applied directly to wood, GRP, previously disc-ground steel and aluminium. Colour: light grey. Packaging: 0,50 / 2 Kg.



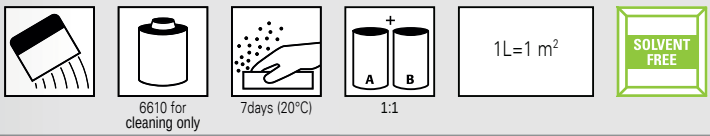
EPOMAST EVO - Ultra-light epoxy filler

An epoxy filler of the latest generation, formulated to provide homogeneous consistency and avoidance of air bubbles during application. Epomast Evo is easy to apply and to sand and - after curing - provides excellent mechanical properties such as flexibility and good resistance to compression. Suitable for application on boats made of steel, aluminium, GRP and wood. Epomast Evo can be used also for levelling deeper surface defects, when applied with several passes. Suitable for filling both areas above and below the waterline. Can be used also - owing to its creamy consistency and fine grain - as a knifing filler for the application of finishing paints. Colour: light blue. Packaging: 1,50/ 5,00 litres.



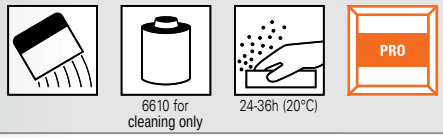
EPOMAST RAPIDO - Fast drying epoxy knifing filler

Two-pack, fast drying, high resistance epoxy filler designed for final profiling and small repairs. Can be applied up to a thickness of 1 cm with one single-pass. Epomast Rapido can be applied to any kind of substrate after the application of a suitable primer. Can be applied onto Epomast Pro or to suitable epoxy undercoats both on below and above waterline areas. For best results, prior to the application of a topcoat, a suitable barriercoat or undercoat are recommended. Easy to sand in a short time, both dry and wet conditions. Colour: white. Packaging: 0,50 litres.



STUCCO VELOX - One-pack conventional finishing filler

Stucco Velox is generally used for final smoothing as part of one-pack systems used on topsides and superstructure with a maximum thickness of one millimetre per coat. It should not be used in systems subject to continuous or intermittent immersion in water. Application in thicknesses of more than one millimetre can cause cracking in one-pack systems used for topsides and superstructures. Stucco Velox can be painted over with alkyd undercoats and finishes such as Eurogel, Italia and Unigloss. Colour: white. Packaging: 0,75 litres.



SUBCOAT S - Two-pack epoxy filler for underwater application

A pure epoxy compound, 100% solids by volume, which can remove water from the surface to be treated,providing excellent adhesion even on wet surfaces. Particularly useful for temporary repairs of leaks and cracks in the boat when it is in the water or moving. Subcoat S adheres easily to GRP, gel coats, old epoxies, epoxy tar as well as steel and concrete. It is suitable for temporary repairs on seachests, boot topping and submerged parts of cement quays. It is resistant to temperatures up to 100°C. Colour: light blue. Packaging: 2 Kg.

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

PROTECTING YOUR BOAT

After the surface preparation and primer application, proceed with the application of one or more barrier coats, which are needed to protect your boat against corrosion. The thickness of these barrier coats is particularly important for metal surfaces, whether steel or aluminum.

The minimum required DFT (dry film thickness) for areas below the waterline is 400-450 microns of protective coatings. For surfaces above the waterline, 250-300 microns are sufficient.

Compliance with the specified DFT is very important. In the technical data sheet of each product the theoretical coverage is indicated, therefore you can calculate the quantity of paint to be used. Just divide the surface area to be painted (m^2) by the theoretical coverage to obtain the liters required for each coat.
Normally barrier coats are applied using a brush or roller, being careful not to "pull" the paint. "Pulling" the paint leads to a greater coverage but also to less thickness and therefore to less protection. Some barrier coats have been formulated to provide a greater thickness while requiring a lesser number of coats. They contain resins with low viscosity and additives (thixotropic agents) which increase their anti-sagging properties allowing a higher thickness to be applied.

Areas not to be painted and those requiring a different paint system shall be masked. Spraying is a very effective application procedure but requires a professional operator.

For example, AQUASTOP has 100% solids by volume and has been formulated to be applied with a roller at a DFT of 200 microns per coat. For EPOWAY, with 32% solids by volume, you will need at least 2 coats. For TICOPRENE you will need 3 - 4 coats to apply 200 microns

GEL COAT

After sanding, primer application and - if necessary - filling, apply 2 coats of an epoxy barrier coating such as UNIKOTE PRO, ADHERPOX or EPOWAY.
Please consult the technical data sheets in order to be able to choose the right product for your boat.

IRON, LIGHT ALLOY AND STEEL

Metallic surfaces, which are prone to corrosion and stray currents, require suitable protection and coats with higher DFT.
Therefore multiple coats of ADHERPOX or UNIKOTE PRO should be applied.
Please consult the technical data sheets to choose the most suitable product and the appropriate DFT for you boat.

WOOD

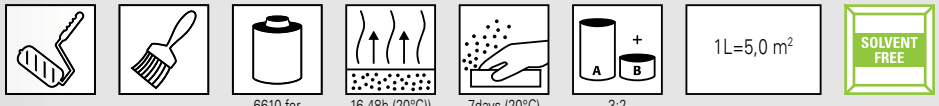
To protect wood properly apply at least 3 coats of RESINA 2000, or as an alternative ADHERPOX. For conventional one-pack paint systems apply 4-5 coats of TICOPRENE, which has a good barrier effect, provided also by the aluminum particles in the this coating.

CAST IRON, LEAD, OTHER METALS

These are the metals used for keels, flaps and rudders. For proper protection apply ADHERPOX, UNICOTE PRO or, as an alternative, AQUASTOP.

AQUASTOP - Antiosmosis protection and treatment

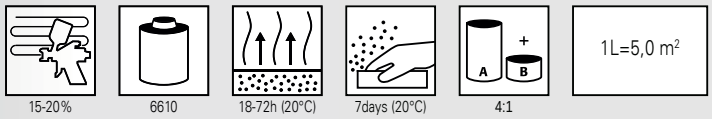
Aquastop is designed specifically for the treatment of GRP boats affected by OSMOSIS and is particularly recommended as a preventative, protective treatment. This product is water resistant (both sea and fresh water), making the boat highly impermeable, and forms an effective barrier layer for submerged metal parts (keels, flaps, rudders, etc.). Colour: light blue. Packaging: 0,75 / 2,50 litres.



6610 for cleaning only | 16-48h (20°C)) | 7days (20°C) | 3:2

EPOWAY - High-build epoxy undercoat

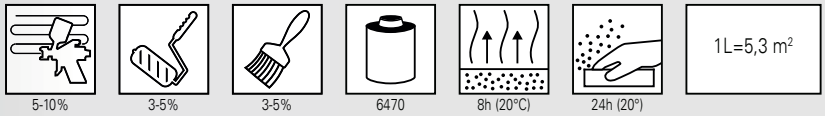
Two-pack epoxy undercoat with barrier effect, which can be applied to any kind of substrate (wood, steel, aluminium and GRP). This coating may be used both as barrier coat and as undercoat for enamels. Can be recoated, after sanding, with two-pack enamels. Colour: white. Packaging: 0,75 / 2,50 litres.



15-20% | 6610 | 18-72h (20°C) | 7days (20°C) | 4:1

TICOPRENE - Chlorinated rubber primer with aluminium flakes

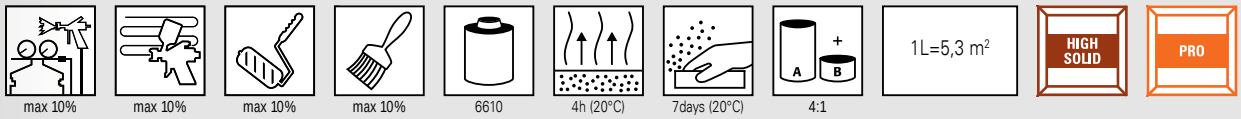
Ticoprene is a one-pack chlorinated rubber primer pigmented with aluminium flakes, an all-purpose primer for the marine environment, suitable for maintenance painting of wood and steel boat hulls and structures. It can be applied also to zinc primers as well as to one-pack and two-pack primers. Well suited as a sealer for old antifoulings. Ticoprene provides good protection to parts immersed in salt and fresh water. Colour: aluminium. Packaging: 0,75 / 2,50 litres.



5-10% | 3-5% | 3-5% | 6470 | 8h (20°C) | 24h (20°)

UNIKOTE PRO - Multipurpose epoxy coating

Two-pack, high-build paint with a dual-purpose: protection and finish. This paint can be applied to any type of preexisting coating in good condition. It can be applied also without primer directly to gel-coat, steel and light alloy both at low and high thickness. Unikote PRO withstands atmospheric agents, immersion, abrasion, wear and has a high chemical and mechanical resistance. This new formulation is resistant against carbamate formation with limited tendency to blushing. Therefore it can be used also as a finish for professional boats, although its glossiness fades faster if compared to enamels. Unikote PRO is the ideal paint for all working boats owing to its long protection, the possibility of application under less favourable climatic conditions as well as the practical advantage of using the same product for hull, topsides, deck and interiors. Colour: ice-white, grey mm. Packaging: 5,00 litres.



max 10% | max 10% | max 10% | max 10% | 6610 | 4h (20°C) | 7days (20°C) | 4:1

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

OSMOSIS

During the construction of GRP boats, if low quality materials are used and in the case of below standard application, osmosis may develop. Osmosis can be considered as some kind of "infective disease" which develops in a very deceitful way and its most evident effects (blisters) appear only when the disease is already in an advanced stage.

WHAT IS OSMOSIS

GRP hulls are manufactured using a mould. The inside of the mould is coated with anti-adhesion wax. At first, the gel-coat, corresponding to the outside layer of the hull, is applied. The gel-coat consists of a polyester resin containing pigments with the desired color. Several layers are applied with spray equipment.
Subsequently, several layers of fiberglass mats are applied. Each layer is impregnated with polyester resin. After completion of the curing period, the hull is removed from the mould.
Osmosis is a phenomenon which becomes visible through the formation of blisters. The blisters are filled with water and localized between the layers of resin in the hull. In the beginning the blisters are small in size and restricted to a few areas of the hull. When the phenomenon is progressing, the blister's size increases and eventually the whole area of the hull is affected.
The main cause of osmosis is capillarity which enables water molecules to penetrate into the fiberglass laminate of the hull. Once inside, the water reacts with the residual acidic compounds in the laminate creating a concentrated solution.
More water is absorbed to balance the concentration of the solution trapped inside the laminate (through osmotic pressure). This causes the formation of the well known blisters.

FORMATION OF BLISTERS

The formation of osmotic blisters on a boat hull occurs in five steps. If you study carefully the steps explained here below and check your boat hull periodically, you might be able to prevent osmosis before serious damage has developed.

1) Formation of air blisters, often of small size between the gel-coat and the first layer of fiberglass.

2) Water take-up in the blisters due to the permeability of the gel-coat.

3) Hydrolysis of the gel-coat and of the polyester resin resulting in an acidic solution.

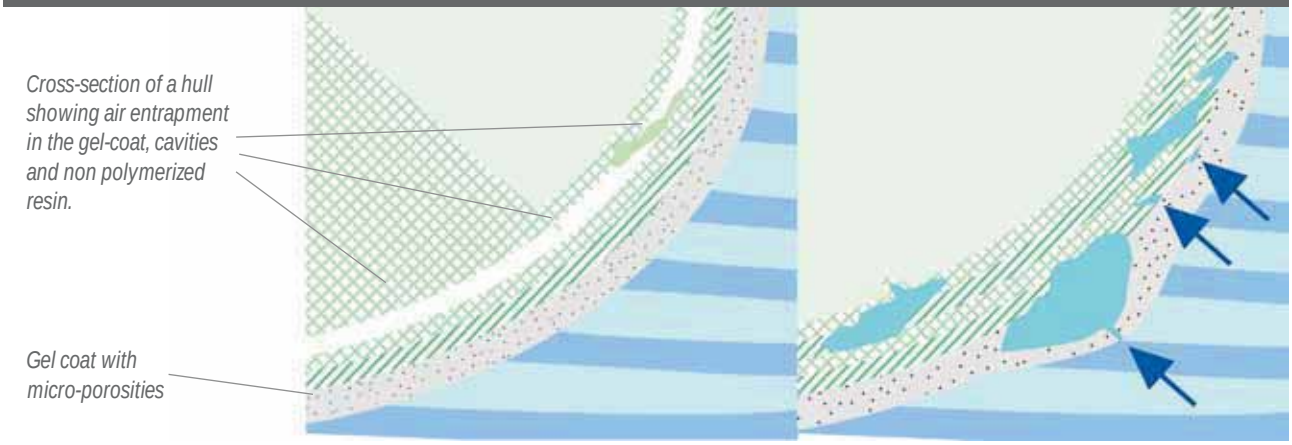
4) Increase of the blister size due to osmotic pressure.

5) The interior pressure of blisters causes cracking of the gel-coat.

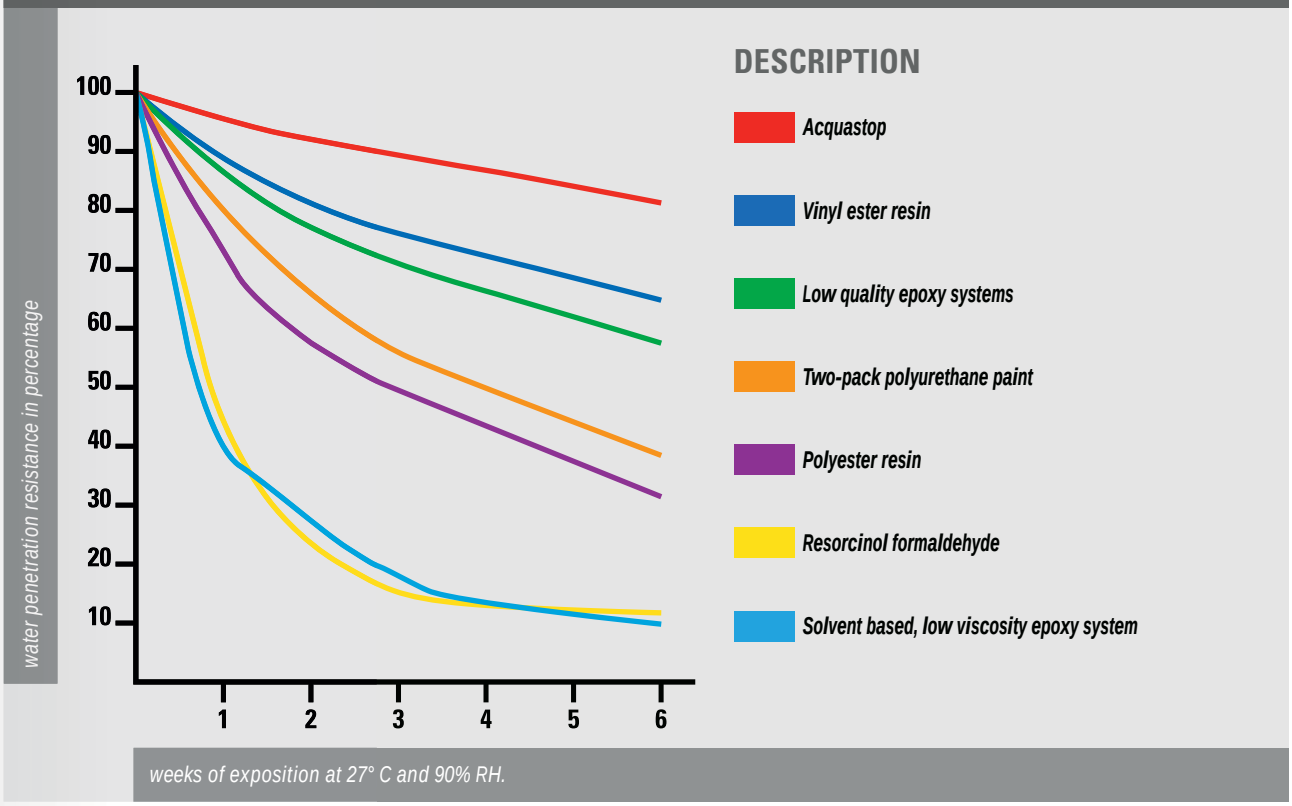
CAUSES OF OSMOSIS

The main causes of osmosis formation are the following:
- *Residues of non polymerized resin*
- *Water soluble contaminants in the laminate*
- *Micro-porosities in the gel-coat or in the fiberglass mats due to air entrapment during the manufacturing process.*

Left, gel-coat with air bubbles and non polymerized resin due to manufacturing defects.
Right, progressive deterioration due to water absorption from the outside, which causes blistering.



The diagram shows the resistance against water penetration for different materials used as barrier coats for boats.



HOW TO RECOGNIZE OSMOSIS

After each boating season it is advisable to check the hull of your boat. When the boat has been hauled out of water, pressure wash the hull with fresh water and inspect it carefully.

There are blisters and blisters. Some blisters occur for reasons other than osmosis. Old layers of antifoulings which are porous and delaminating can cause blistering. Blisters originating from osmosis are easy to recognize for their characteristic dome shape, because they are hard to cut open and because they contain a liquid with a strong vinegar smell.

If you are concerned that the hull is affected by osmosis, remove the antifouling in 6 spots of the hull, 3 on each side, at the center, the stern and the bow. For each spot an area of 10 x 10 cm is sufficient. Measure the humidity content in the hull with suitable humidity gauge. If the hull is affected by osmosis, the humidity content will be significantly higher than 10%.

The dielectric constant of water is 75 times higher than that of air and significantly higher than that of boat building materials. This property makes it easy to measure the humidity content of GRP laminates with a suitable humidity gauge. Humidity gauges have a pad sensor suitable for fast and safe measures of the humidity content. A humidity check of the boat hull can safe a lot of time and money, if performed prior to carry out any kind of osmosis treatment.

AQUASTOP

AQUASTOP consists of a solvent-free mixture of epoxy resins. If osmosis occurs, the barrier effect of gel-coat, to me removed completely, can be replaced with a coat of AQUASTOP with a DFT of at least 600 microns.

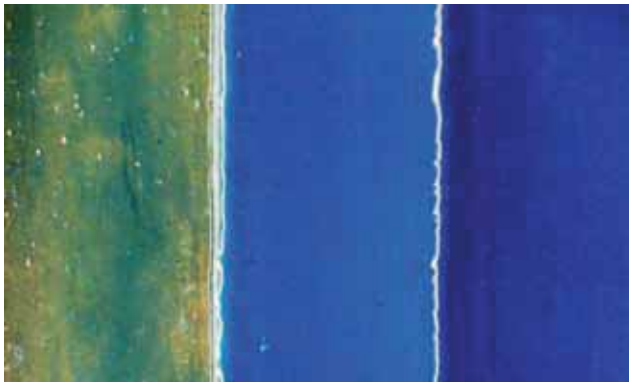
AQUASTOP BY VENEZIANI

The most significant features of Aquastop are: very high impermeability, excellent penetration power, high thickness (can be applied at 200 microns per coat without sagging)

AQUASTOP provides excellent protection against osmosis both as a preventive treatment for new boats and as a repair treatment for damaged boats.

If a boat has been damaged by osmosis, the best advise is to contact one of the Veneziani Yachting Specialized Centers. Our Main Technical Department is at your disposal for information and advice.

AQUASTOP has been formulated with a tinting pigment. After application it shows a clear light blue color. This coloration is useful during painting to understand how much product is being applied: the higher the thickness, the darker the color.



AQUASTOP should be applied within a temperature range of 15° to 35° C, at a relative humidity below 70% and with a humidity content of the boat hull not higher than 10%.

Conditions not in compliance with those mentioned above may affect the result of the treatment.

If during the drying period there is an abrupt change of climatic conditions, this may cause the formation of a sticky layer (blushing), which is easy to remove with water and an abrasive sponge. Wait until dry before resuming the application of the coating system. If the 48 hours of maximum recoat time are exceeded, the last coat must be properly sanded prior to recoating.
On the market you can find sometimes glass laminates of poor quality, which may affect the performance of the Aquastop system. In this case we recommend to apply an additional coat of Aquastop with brush as a sealer, prior to the application the repair system of 600 microns.

It is of outmost importance to comply with the thickness specified by Veneziani Yachting . You can check the thickness as follows:

Measure the thickness during application with a wet thickness gauge,

or

apply, independently from the number of coats and the application method, the recommended litres, using the theoretical coverage of Aquastop for the calculation: 5 m²/L.

PREVENTION SYSTEM

Even if a boat's hull has not been affected by osmosis, it may be a good idea to improve the impermeability of the gel-coat with AQUASTOP. Also a new boat's hull may have structural defects non visible by naked eyes, such as air bubbles or contaminants, and preventing is much cheaper and less time consuming then curing.

1 Degrease the gel-coat carefully until you are sure to have removed all traces of anti-adhesion waxes left over from the manufacturing process. We recommend to use abrasive sponges and Detersil, a specific detergent from Veneziani Yachting.

2 Wash down with fresh water. Dry sandpaper with 120 - 180 grade abrasive paper.

3 Apply 2 coats of Aquastop with brush or short pile roller at a total DFT of 400 microns. The recoating interval is 16 hours minimum and 48 hours maximum. The theoretical coverage is 5 m²/L per coat. Check for amine presence between coats.

4 We recommend to wait 48 minimum 72 maximum hours before applying the subsequent coat of ADHERGLASS or ADHERPOX, in order obtain proper chemical curing of AQUASTOP and ensure a better impermeability. Prior to primer application sand with fine grade abrasive paper.

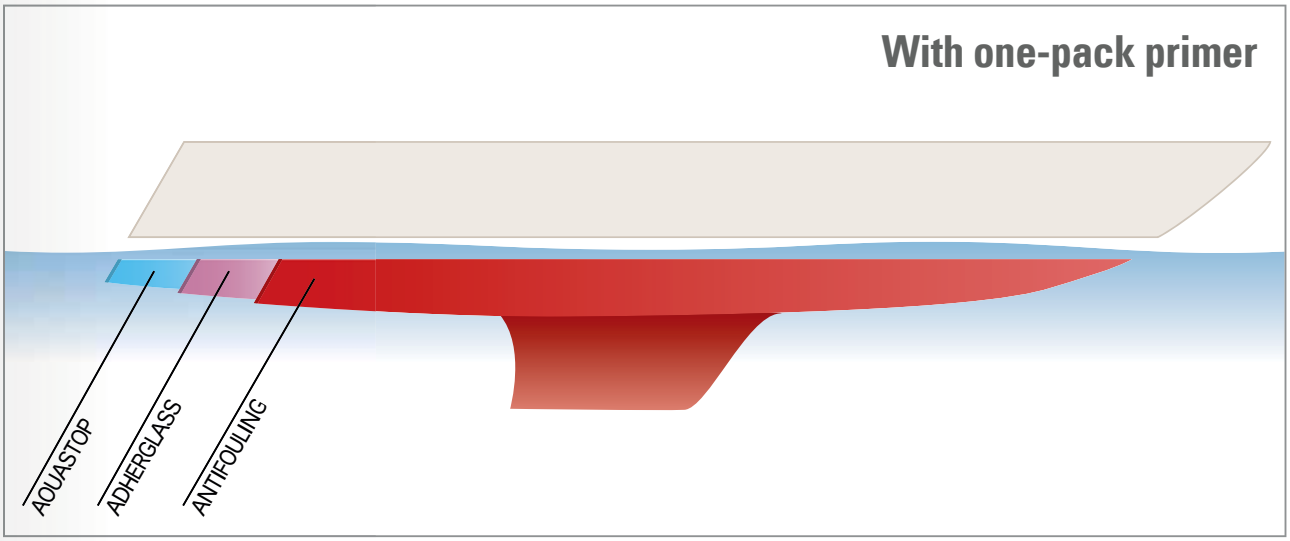
ADHERGLASS
Apply 1 coat by brush at a thickness of 15 microns and a theoretical coverage of 13,3 m²/L. Recoating time: 2-4 hours at 20° C.

ADHERPOX
Apply 1 coat o by brush, roller or spray gun at a thickness of about 100 microns and a theoretical coverage of 6 m²/L. Recoating time: minimum 10 hours at 20° C, maximum 3 months if recoated with an antifouling.

5 Apply 2 coats of antifouling. For the right choice of antifouling and the calculation of the right quantity to apply please consult pages 26 to 33.

PREVENTION SYSTEM

With one-pack primer



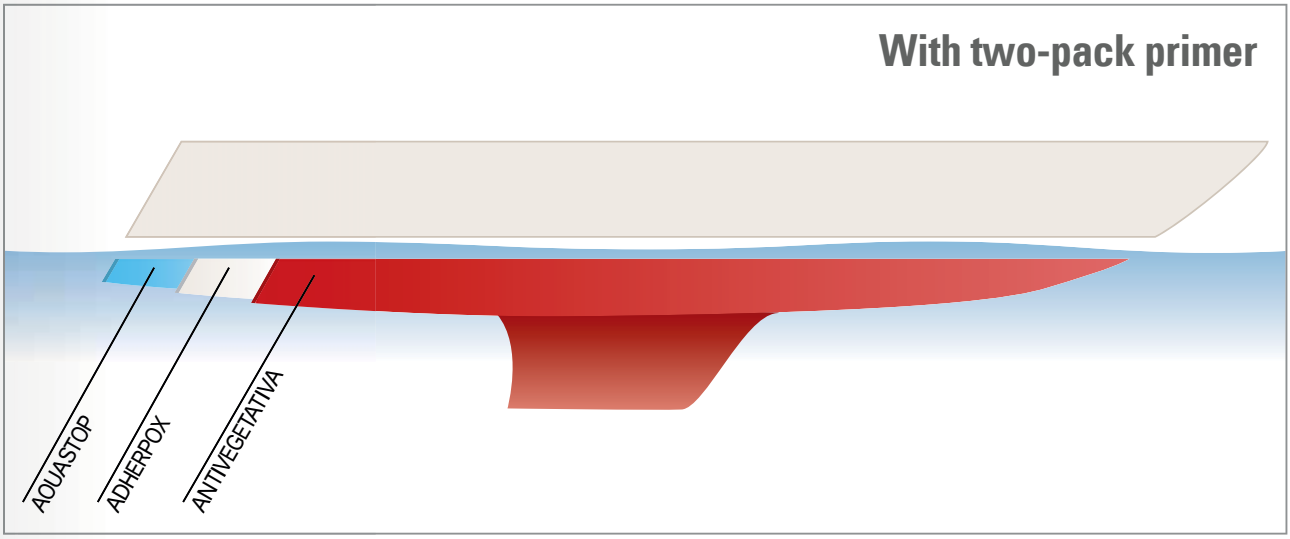
HULL

- 2 coats of **AQUASTOP** (DFT 200 microns; theoretical coverage 5 m²/L)

  Wait for 48 minimum 72 maximum hours; prior to primer application sand with fine grade abrasive paper.

- 1 coat of **ADHERGLASS** (DFT 15 microns; theoretical coverage 13,3 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depend on the type of antifouling applied)

With two-pack primer



HULL

- 2 coats of **AQUASTOP** (DFT 200 microns; theoretical coverage 5 m²/L)

  Wait for 48 minimum 72 maximum hours; prior to primer application sand with fine grade abrasive paper.

- 1 coat of **ADHERPOX** (DFT 50 microns; theoretical coverage 12,0 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depend on the type of antifouling applied)

DFT and theoretical coverage refer to single coats

REPAIR SYSTEM

With AQUASTOP it is also possible to repair boat hulls already affected by osmosis. The application of the repair system is very difficult procedure. Instead of "do it yourself" work we recommend to contact one of the AQUASTOP CENTERS, which are provided with the necessary equipment and have a staff with training for osmosis treatment.

REPAIR SYSTEM APPLICATION

1 Removal of all damaged layers (gel-coat and if necessary also damaged layers of GRP) by means of grit-blasting or hydro-blasting. Both procedures are effective.

2 Chiseling by means of flat chisel and rubber hammer, a procedure to use in case of very deep osmosis. After the drying (curing) period possible protruding glass fibers must be removed by means of disc sanding with rotary or orbital disc sanders, using

a 36 grade semi-rigid abrasive disc. This procedure replaces grit-blasting in the case of superficial osmosis, when removal the gel-coat layer is sufficient.

3 Smoothing with an elliptical planing machine (outfitted with heat-resistant blades) and subsequently disc sanding with rotary or orbital disc sanders.

4 Repeated washing down and rinsing with fresh water, in order to eliminate the bleeding of acidic solution from the fiberglass laminate, which could affect the outcome of the repair work.

5 Afterwards the curing period begins, during which the boat should be stored outside with a plastic sheet protection from the waterline down. If the boat is stored inside a shed, proper ventilation and humidity control is needed. Artificial means such as air dryers, dehumidifiers or heaters are not always effective.

Curing periods may vary from 2 months minimum to a maximum of 6 months. In order to verify the completion of the curing and the drying progress, the humidity content should be checked once a week and the results and dates marked with a felt pen on the most critical hull areas. Often there is a color change in the laminate from yellow to a white tint when the drying is progressing.

During the curing period the washing down of the hull must be repeated at least 3 times, in order to make sure that all bleeding liquid shall be eliminated. It may be necessary to open the laminate in suspect areas by means of a chisel or a disc sander.

The hull can be considered dried out when the measured humidity content is below 10%.

The humidity measurements should be carried out dividing the hull into 8 areas and making 4 measures for each side. When all damaged layers have been removed and the curing has been completed by reaching a humidity content below 10%, the coating application can start.

6 Application of 1 coat of Aquastop with brush, after mixing of components A + B, taking care to soak all deeper cavities and using vertical and longitudinal cross strokes. The thickness must be 200 microns with a theoretical coverage of 5 m^2/L.

7 After a drying interval of 16 hours minimum and 48 hours maximum (at 20° C), smooth all imperfections with the filler EPOMAST EVO, which has a low specific weight and therefore doesn't affect the weight of the boat significantly.

For filling limited areas you can use EPOMAST, which is very easy to apply, or, if application times are limited, EPMAST RAPIDO, a filler which can be sanded after only 3-4 hours at 20° C.

8 Sanding of the whole hull with 60 grade abrasive paper.

9 Application of 2 additional coats AQUASTOP with brush, short pile roller or foam roller. If using a foam roller, replace it every 20 minutes since then it becomes too soft. If a short pile roller is used, the coat will have a slight orange peel appearance. If using a brush, apply with longitudinal strokes.

The minimum total thickness must be at least 400 microns. The recoating interval between coats is 16 to 48 hours at 20° C.

The minimum recoating interval between the second coat of AQUASTOP and the coat of ADHERGLASS should be at least 72 hours in order to obtain proper chemical curing and best impermeability.

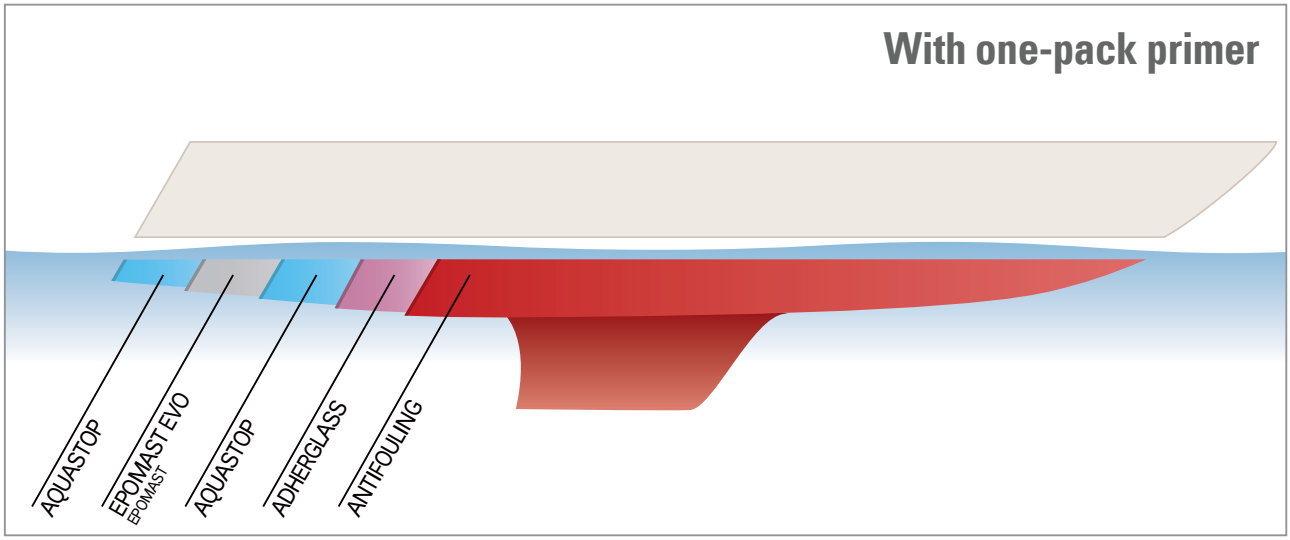
Before proceeding with the application of the primer, check the surface and, if necessary, sand with fine grade abrasive paper.

10 Application with brush of 1 coat of ADHERGLASS, or application of 1 coat of ADHERPOX with brush, roller or spray gun. Application

of 2 coats of antifouling. For the right choice of antifouling and the calculation of the right quantity to apply please consult pages 26 to 33.

REPAIR SYSTEM

With one-pack primer



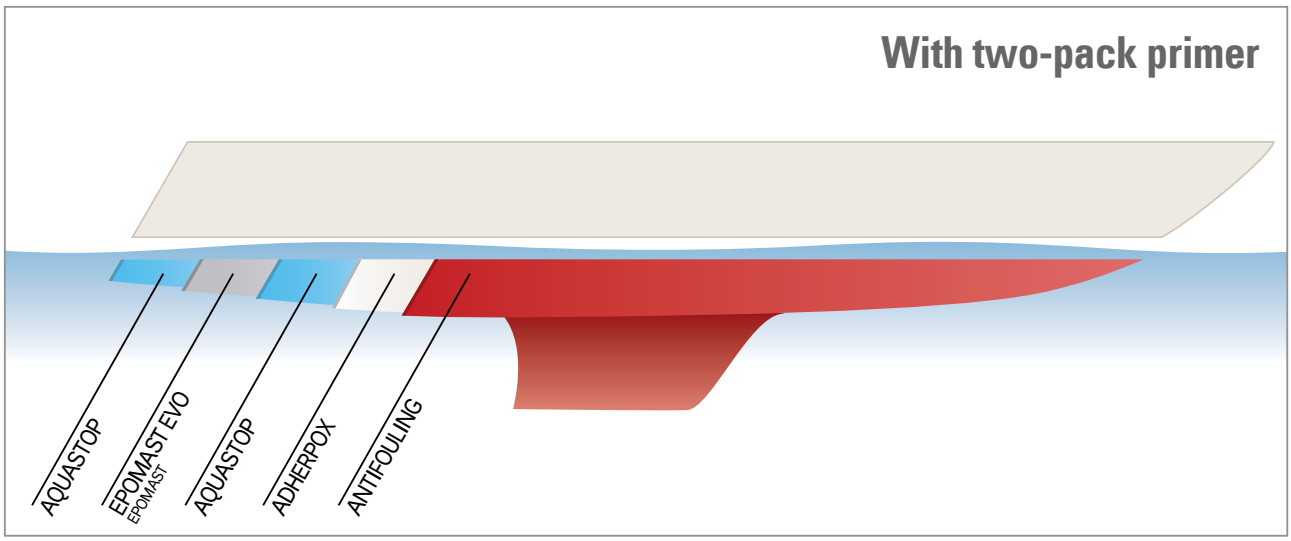
HULL

- 1 coat of **AQUASTOP** (DFT 200 microns; theoretical coverage 5 m²/L). After 16 hours at 20°C:
- Fill with **EPOMAST EVO**, for small areas use **EPOMAST**. After sanding proceed with:
- 2 coats of **AQUASTOP** (DFT 200 microns; theoretical coverage 5 m²/L)

Wait for 48 minimum 72 maximum hours; prior to primer application sand with fine grade abrasive paper.

- 1 coat of **ADHERGLASS** (DFT 15 microns; theoretical coverage 13,3 m²/L). After 10 hours at 20°C:
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depend on the type of antifouling applied)

With two-pack primer



HULL

- 1 coat of **AQUASTOP** (DFT 200 microns; theoretical coverage 5 m²/L). After 16 hours at 20°C:
- Fill with **EPOMAST EVO,** for small areas use **EPOMAST**. After sanding proceed with:
- 2 coats of **AQUASTOP** (DFT 200 microns; theoretical coverage 5 m²/L)

Wait for 48 minimum 72 maximum hours; prior to primer application sand with fine grade abrasive paper.

- 1 coat of **ADHERPOX** (DFT 50 microns; theoretical coverage 12,0 m²/L) After 10 hours at 20°C:
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depend on the type of antifouling applied)

WE RECOMMEND:
to launch the boat not before a minimum of 7 days after the application of the last coat of AQUASTOP.

ATTENTION:
if the maximum recoating times are exceeded, always sand before proceeding with the coating system.

DFT and theoretical coverage refer to single coats

FREQUENTLY ASKED QUESTIONS

PROBLEM:	ANSWER:
The coating is not drying	• Wrong dosage of components • The components have not been mixed properly • The temperature is too low • RH is too high
The coating is drying in spots	• Application after poor mixing • Temperature differences on the hull
The coating is too soft	• Low temperature • Thinner addition • Wrong mixing ratio • Primer applied too early
The coating is sticky	• Low temperature • RH is too high
The coating is delaminating from substrate	• Poor surface preparation • Leftover contaminants • Pot-life exceeded • Excessive humidity content in the substrate
Intercoat delamination	• Expired recoating interval • Poor sanding between coats • Poor cleaning between coats • Excessive RH during drying
Blisters in the coating system	• Excessive humidity in the substrate • Premature launching

AQUASTOP CENTERS

These are boatyards specialized in Aquastop application. They have a contractual agreement with Veneziani Yachting , are provided with the necessary equipment and have a staff with training for osmosis treatment. First of all, the degree of osmosis must be assessed (a difficult task to be performed by experienced personnel) in order to be able to specify the proper repair procedure. Second, the suitable equipment for the job must be available.

Please contact our Main Technical Department: We will to glad to advise you and to inform you about the closest Aquastop Center. We recommend to haul up the boat affected by osmosis at the end of the season, in September or October, in order to be able to complete the curing process during the next spring, with favourable climatic conditions. The professional skill of the working staff and the quality the applied products are winning cards for fighting osmosis and for obtaining satisfactory and long lasting results.

GUARANTEE "GOOD BYE OSMOSIS"

All repair jobs performed by Aquastop Centers are covered - free of charge - with a special guarantee by Veneziani Yachting.

When one of the Aquastop Centers is starting an anti-osmosis repair job, Veneziani Yachting opens a guarantee file called "Good Bye Osmosis". The file contains all relevant data such as boat description, type of damage, description of the work and the curing process. During the job, a certain number of inspections are performed by Veneziani Yachting and the humidity content of the hull is measured. When all work has been completed according to specification, Veneziani Yachting issues a "Good Bye Osmosis" certificate, which guarantees directly and free of charge the result of the repair job for a period of 3 years.

PROTECTING WOOD

Wood has been used in boat construction from antiquity to the modern days. Wood is often used to add an air of tradition to a boat, with features such as wooden decks, chart tables and items of furniture.

PROTECTION AND RESTORATION

However, wood is a material which easily deteriorates. Moisture penetrating into wood will result in the formation of mould and fungus, making the wood porous and cause rotting. In the past, wood was protected with of oils and oil-based varnishes, but today systems are available which protect wood permanently and prevent moisture penetration.

RESINA 2000 by Veneziani Yachting is such a product and has the following properties:

- in-depth penetration of the fibers;
- solvent-free and 100% solids by volume;
- easy to use, having a mixing ratio base/hardener 2:1;
- long enough pot life for comfortable application;
- Can be used either to permanently protect new wood or to restore damaged wood.
- can be used for several applications with a range of additives.

All boats, independently from material they are made of, must be ventilated in order to keep the interiors dry and to prevent deterioration. The first step of application work is to clean the surfaces, to sand them and then you can apply RESINA 2000.

RESINA 2000 can be applied by brush, roller or spatula. Mixed with its additives MICROSFERE, MICROFIBRE and MICROSILICE, RESINA 2000 can be used for filling deep dents and cracks and to glue, repair and reinforce the framework of the boat (keels, posts, frames and beams).

With RESINA 2000 and the additives MICROSFERE, MICROFIBRE and MICROSILICE you can perform any gluing and repair jobs.
Epoxy resins should be applied only at a temperature range from 10°C to 35°C. If the application is carried out near the limits of this temperature range, drying and curing times will be slower or faster.
Also part of the RESINA 2000 range are the dispensing pumps, designed for an easy and accurate dosage , which can be fitted directly on the cans of a 1,5 l RESINA 2000 package. These pumps

Before using the RESINA 2000, check that the wood to be painted is completely dry and moisture-free. There are simple gauges available, such as the SOVEREIGN gauge, which can be used to check the moisture level of the wood. A dehumidifier can be used to remove excess moisture.

provide an accurate dosage of the base/hardener mixture, without the difficulties of manual dosing. In case of multiple use, the dispensing pumps can be left mounted on the cans. RESINA 2000 can be recoated with both one-pack and two-pack enamels or varnishes.

FOR ADDITIONAL INFORMATION:
Please request the brochure:
THE EPOXY SYSTEM RESINA 2000.

RESINA 2000 - Protective barrier system for wood

Resina 2000 is a solvent-free structural epoxy system designed for use in the construction, protection and restoration of wood, GRP and many other substrates. Resina 2000 is a technologically advanced system which offers excellent penetration, flexibility and adhesion which make it essential for maintaining and treating wood. With Resina 2000 it is possible to obtain high strength wood-to-wood joints, surface protection and an impermeable hull. Wood treated with Resina 2000 becomes impermeable and stronger while maintaining its characteristics of flexibility and resistance. Once the hardener has been add, special additives can be mixed in to obtain fillers which are easy to apply and extremely strong. Colour: clear. Packaging: 0,75 / 1,50 / 15 litres.

6610 for cleaning only | 10 - 36h (20°C) | 7days (20°C) | 2:1

MICROFIBRE - Synthetic microfibers

Microfibre belongs to the range of additives to be mixed with RESINA 2000 in order to produce compounds with different properties. MICROFIBRE consists of microfibers with an average length of 500 microns, which, when mixed with RESINA 2000, create a strong compound, owing to an multidirectional internal structure. Due to the low absorbency of resin, the penetration capacity of RESINA 2000 is not affected. The main purpose is the gluing of T-joints, where a filler with high viscosity and high mechanical resistance is required. Packaging: 0,75/ 2,50 litres.

6610 for cleaning only

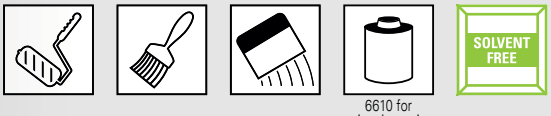
MICROSFERE - Hollow glass-microsperes

Microsfere belongs to the range of additives to be mixed with RESINA 2000 in order to produce compounds with different properties. MICROSFERE consists of microspheres with low absorbency of humidity, which therefore can be used for applications above and below the waterline. Their main purpose is the production of fillers with low specific gravity, which are easy to sand and whose consistency may be varied according to the needs of the operator. These fillers are best suited for the repair of horizontal cracks, small surface defects and as knifing fillers. Packaging: 0,75/ 2,50 litres.

6610 for cleaning only

MICROSILICE - Colloidal microsilica

Microsilice belongs to the range of additives to be mixed with RESINA 2000 in order to produce compounds with different properties. MICROSILICE is a thickening additive used with RESINA 2000. Best suited for gluing, jointing and the repair of defective spots. It may be mixed together with other additives of the range in order to improve knife application and appearance of the product and is suitable for both above and below waterline applications. Packaging: 0,75litres.



6610 for cleaning only

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

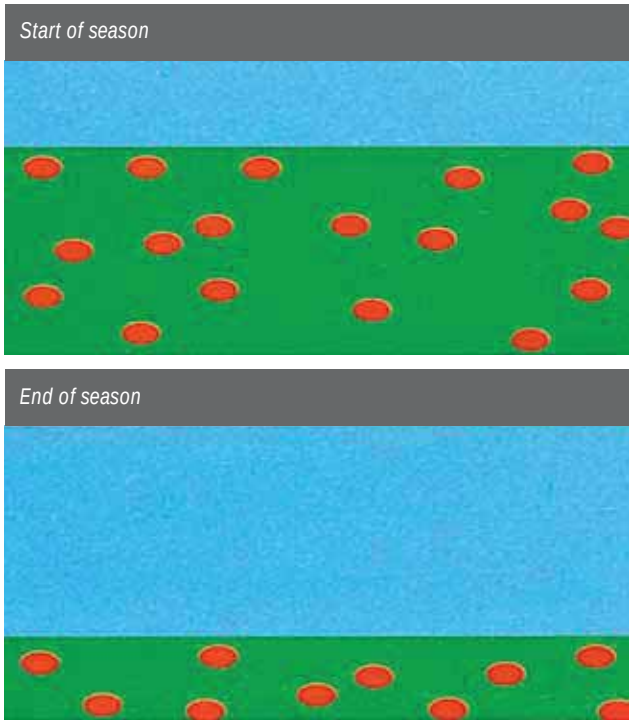
ANTIFOULING PROTECTION OF THE HULL

Antifoulings are the most important paints for maintaining your boat, being indispensable for keeping the hull clean and in good condition. Antifoulings contain biocides, (toxic compounds) which repel fouling such as slime, weed, barnacles, tube worms and other species. Our biocides have been tested and formulated to be active only in the immediate vicinity of the hull and therefore have a minimal environmental impact. The choice of antifouling depends on the boat material, on the type of boat and on the kind of water where the boat is used. All Veneziani Yachting antifoulings comply with the EEC regulations for biocides.

SELF-POLISHING ANTIFOULINGS

When, less than 150 years ago, McInnes in England and Gioachino Veneziani in Trieste invented the first really effective antifouling paint, this already had self-cleaning, eroding and controlled leaching characteristics. In fact, all antifoulings in order to be effective must release into the water substances which will inhibit, repel or delay the attack and development of fouling, which can be an animal (mollusks) or vegetable (weed) encrustation. Antifoulings have to be, through various means, partially soluble in order to leach.

Self-polishing antifouling



= biocide

At first, the antifouling was a kind of soap, combining natural resins (like rosin) and greases (like Marseille soap). Then the leaching was controlled by mixing various natural, soluble resins with synthetic, insoluble resins In the 1970s, the leaching method was perfected by the use of acrylic resin copolymers and tin organic compounds and this is when the term self-polishing was coined.

Today, tin compounds can no longer be used for environmental reasons - they are legally banned - and therefore these copolymers can no longer be used. However, the term self-polishing can rightfully also be used for all paints which have various means of controlled leaching. The terms self-leaching, eroding, controlled solubility, progressive leaching, self-cleaning and self-polishing are now in fact synonymous.

Veneziani Yachting offers a wide range of antifoulings with self-polishing properties:

ALUSPRINT, hydrophilic with strong antifouling power, without tin and copper compounds. Suitable for all kinds or boat materials, also for aluminum.

DRP100, self-polishing with a high content of copper compounds and organic biocides, providing excellent protection as well as long duration. Originally formulated for professional boats, guarantees good performance for all types of boats.

EVEN EXCEL SPC, self-polishing, formulated with the new self-polishing copolymer technology, dissolves in both fresh and sea water, in a constant and homogenous way, providing maximum protection against fouling and significant fuel savings.

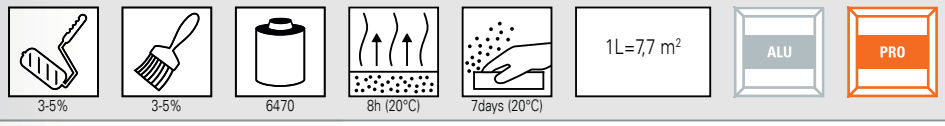
RAFFAELLO, is a high performance antifouling with a hydrophilic matrix, with a high content of copper compounds as well as an addition of pure carbon particles, which provide both excellent antifouling protection and drag reduction in all conditions. Effective in warm and temperate seawater, brackish and fresh water. Raffaello is self-polishing with a progressive solubility and therefore suitable for medium-speed power boats as well as for sailboats. RAFFAELLO WHITE RACING, provides both high antifouling power and the best preservation of the white colour, also after immersion service.

MOBY DICK TF, an antifouling with progressive and constant leaching rate, was originally formulated for professional boat and delivered only in 10 l cans. Now this antifouling has widespread use also for pleasure boats.

SEVENTY is a water-based ablative antifouling designed for the protection against seaweed, barnacles and all other types of fouling in fresh water and sea water. This antifouling is easy to apply and - being without chemical solvents - harmless for the environment and safer to use.

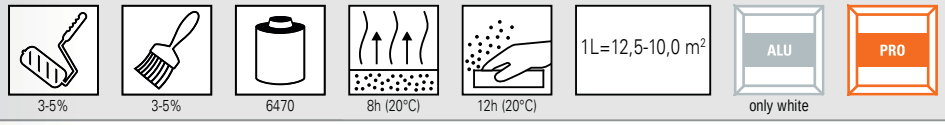
ALUSPRINT - Hydrophilic self-polishing antifouling

Superior grade, hydrophilic antifouling, with excellent antifouling power, which is tin- and copper-free. Alusprint can be applied to all boat materials - even to aluminum - and is suitable for both motorboats and sailboats. Colour: black, dark blue, red. Packaging: 2,50 liters.



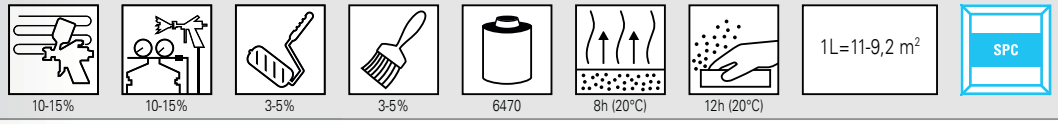
DRP 100 - Professional self-polishing antifpuling

Tin-free, self-polishing antifouling with high content of copper compounds and special biocides, providing very effective long term protection. This product has been formulated especially as an replacement for the previous organic-tin based antifouling and is particularly recommended for long-life protection of working boats. DRP 100 White can be used for aluminum boats. Colour: white, blue, black, red. Packaging: 0,75/ 2,50/ 5,00 liters.



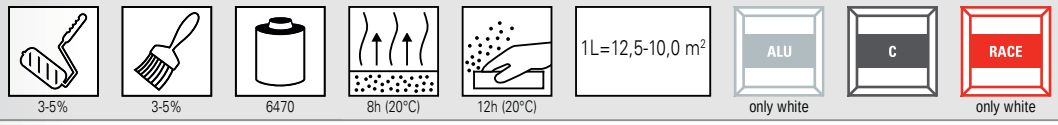
EVEN EXCEL SPC - Self-polishing antifouling with copper oxide

Self-polishing antifouling with copper oxide formulated according to a new technology. This antifouling dissolves in fresh and sea water at a steady and homogeneous rate, providing excellent protection against the most aggressive fouling and reducing fuel consumption. May be applied to boat hulls made of wood, GRP and steel. The formulation of Even Excel SPC complies with the requirements of the European BPD (Biocidal Products Directive). Not suitable for aluminum boats. Colour: platinum grey, red, dark blue, black. Packaging: 0,75 / 2,50 litres.



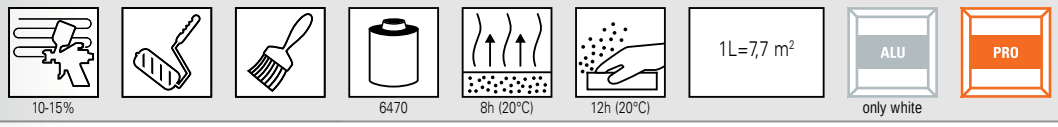
RAFFAELLO - Self-polishing hydrophilic antifouling additive with carbon

Raffaello is a top grade, high performance antifouling with a hydrophilic matrix, with a high content of copper compounds, as well as an addition of pure carbon particles, which provide both excellent antifouling protection and drag reduction in all conditions. Effective in warm and temperate seawater, brackish and fresh water. Raffaello is self-polishing with progressive solubility and therefore suitable for medium-speed motor boats as well as for sailboats. The thickness of this antifouling is reduced progressively during service, avoiding an excessive increase of the antifouling layer also after the application of several coats. Only the white Raffaello is suitable for aluminium boats. Colour: black, dark blue,blue, green, grey, red,white. Packaging: 0,75 / 2,50 / 5 litres.



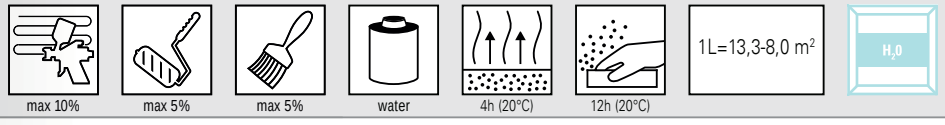
MOBY DICK TF - Tin-free self-polishing antifouling

Self-polishing, tin-free antifouling formulated with special biocides and cuprous compuonds, which provide longterm and durable protection for boat hulls. The formulation of this antifouling provides progressive and constant solubility of the coating during the whole immersion period. This product has been designed as an alternative to self-polishing tin-based antifoulings and is well suited for fishing vessels and work boats. Only the white is suitable for aluminium boats. Colour: light blue, dark blue, black, red, white. Packaging: 10 litres.



SEVENTY - Water-based antifouling

Water-based antifouling designed for protection against barnacles, seaweed and all other types of fouling in freshwater and seawater. This paint is easy to apply, harmless for the environment (complies with the most stringent rules for atmospheric pollution) and (not containing chemical solvents) safer to use. Suitable for frequent launching without affecting the antifouling protection. Seventy are not suitable for aluminum boats. Colour: black, dark blue, light blue, red. Packaging: 0,75 / 2,50 litres



For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

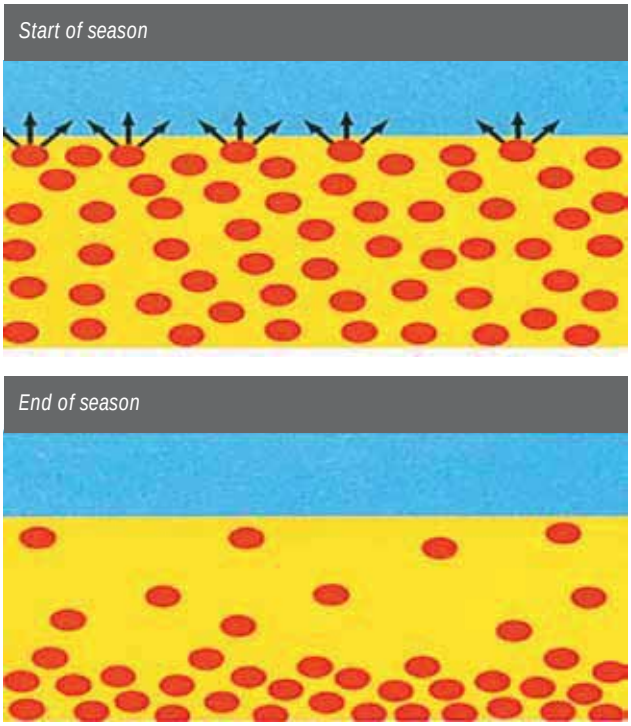
ANTIFOULING PROTECTION OF THE HULL

Antifoulings protect the hull of your boat against fouling, using biocides, which are leached into the sea water. All Veneziani Yachting antifoulings are formulated to comply with the stringent environmental regulations of the EEC. Antifoulings should always be applied using personal protective equipment.

HARD ANTIFOULINGS

Insoluble antifoulings or antifoulings with low solubility are normally used on high-powered boats (35-50 knots) on propellers, shafts, flaps, motor bodies, hydrofoils, bilge keels, waterlines and generally all submerged parts prone to extreme wear or abrasion. These are hard antifoulings. In these products, the leaching of the biocides, which inhibit attack by the fouling, does not occur by the solubility of the binder but, by means of the high concentration of biocides, whose particles are leached by contact.

Hard antifouling



After some time, on the boat hull only the non active matrix is left. For this reason after the subsequent application of new antifouling, the thickness will increase. Therefore removal of the whole antifouling coat every 3 - 4 seasons is recommended.
Hard antifoulings should be preferred also for boats which are used daily as well as for boats used in brackish or fresh waters or in ports with strong currents.

Veneziani Yachting offers the following hard antifoulings:

CUPRON PLUS, without tin compounds, contains a high percentage of copper compounds with improved formulation. Originally applied mainly on professional boats, Cupron Plus provides good protection against fouling and is particularly suited for boats moored in warm and aggressive waters.

EUROSPRINT is a long-life antifouling with good abrasion resistance. Suitable for fast powerboats (up to 50 knots) as well as for boats which are slipped frequently (inflatable boats with rigid hull or boats which are trailed often) Eurosprint provides good performances also in Mediterranean waters. Only the white colour is suitable for aluminum boats.

GUMMIPAINT A/F is an antifouling for inflatable boats with elastic hull. This antifouling is very effective and - because of its excellent flexibility and adhesion - suitable for painting neoprene, rubber fabric, PVC, Hypalon, etc. without a primer.

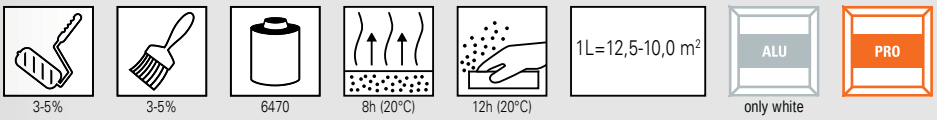
PROPELLER is an antifouling formulated specifically for the protection of propellers, shafts, stern-drives, flaps, etc. where highest adhesion and abrasion resistance is required. This antifouling is copper and tin free and therefore suitable for all types of metals.
More information on the protection of these special parts is provided on page 33. These parts are prone to heavy wear and corrosion and therefore should be treated with care in order to avoid loss of performance.

SPEEDY CARBONIUM is a two-pack medium-hard antifouling which uses carbon particles as an active component for better performance of fast sailing and regatta boats. Suitable for all substrates, aluminum included. Proper application with a spray gun produces a perfectly smooth finish. After 24 hours it is possible to sand the painted area with 600 grade paper in order to improve the smoothness even more, a procedure which results in additional drag reduction and increased speed.

If spray-gun application is not possible, Speedy Carbonium can be applied with a roller. In this case, in order to produce a smooth surface, sanding after each coat should be carried out.

CUPRON PLUS - Conventional copper-free antifouling

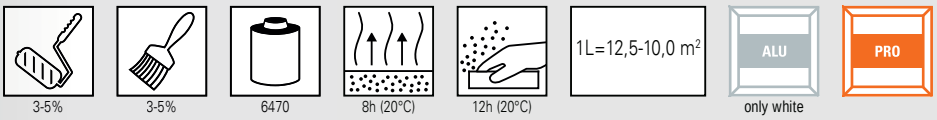
Tin-free, soluble antifouling with special biocides copper-free, a formulation producing a considerable improvement if compared to previous conventional antifoulings. This product is recommended for working boats and no, providing effective antifouling protection also in particularly warm and aggressive waters. For best results 2 coats should be applied for each season. This antifouling is compatible with most primers and undercoats such as Miniax plx, Ticoprene, Unikote PRO. Cupron Plus White can be used for aluminum boats. Colour: black, blue, red, white. Packaging: 0,75/ 2,50/ 10 litres.



3-5% | 3-5% | 6470 | 8h (20°C) | 12h (20°C) | only white

EUROSPRINT - Long life antifouling

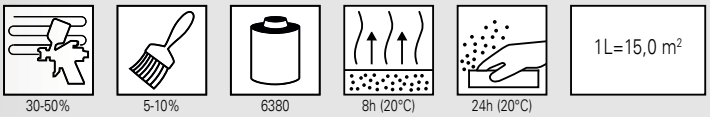
Eurosprint is an antifouling with a high content of copper compounds, suitable for antifouling protection in sea water, brackish water and fresh water. A hard antifouling, with good abrasion resistance, Eurosprint is recommended for sail boats and fast motor boats (also faster than 35 knots). Can be used for boats made of wood, steel or GRP. Only the white Eurosprint is suitable for aluminium boats. Colour: black, blue, red, white. Packaging: 0,75/ 2,50/ 5,00 litres.



3-5% | 3-5% | 6470 | 8h (20°C) | 12h (20°C) | only white

GUMMIPAINT A/F - Antifouling for inflatable boats

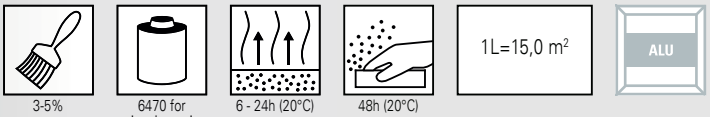
An elastic antifouling recommended for inflatable boats. This antifouling is highly effective and ideal for painting neoprene surfaces, rubber fabric, PVC and Hypalon. It has excellent flexibility and adhesion. Colour: black, grey, white. Packaging: 0,375 litres.



30-50% | 5-10% | 6380 | 8h (20°C) | 24h (20°C)

PROPELLER - Antifouling for propellers, shafts and stern-gear

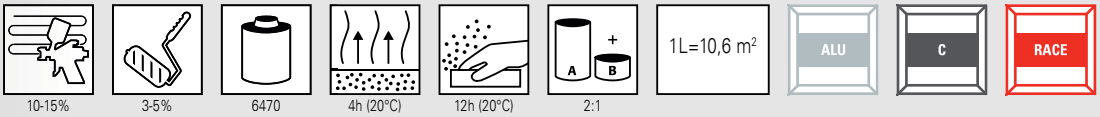
Antifouling specifically formulated for the protection of propellers, shafts, stern-gear, flaps, etc. where highest adhesion and abrasion resistance is required. It is copper and tin-free and therefore suitable for application to all types of metal, providing good antifouling protection. Must be used in combination with Propeller Primer in order to perform properly. The new formulation has improved resistance to cathodic overprotection. Colour: white, grey volvo, black. Packaging: 0,25 litres.



3-5% | 6470 for cleaning only | 6 - 24h (20°C) | 48h (20°C)

SPEEDY CARBONIUM - Two-pack antifouling for racing boats

Two-pack medium hard antifouling using carbon as an active component for better performance. Quick drying, two coats can be applied in one day. Application must be carried out with spraying equipment. After application it can be wet-sanded with 600 grade abrasive paper to achieve extra smoothness. All colours are suitable for sailboats made of GRP, wood, steel and light alloy (on specific primers). Colour: black, blu toned, grey. Packaging: 0,75/ 2,50 litres (only grey).



10-15% | 3-5% | 6470 | 4h (20°C) | 12h (20°C) | 2:1

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

VENEZIANI YACHTING
Is official technical sponsor of **ANDREA MURA** and of his boat VENTO DI SARDEGNA.

First Italian to win the famous Rhoute du Rhum, Andrea Mura is a man full of passion with outstanding expertise and constant fondness for innovation. Supported by the Region of Sardinia, Andrea Mura takes his will to win and to break limits around the world.

In view of the forthcoming undertakings, his boat has been hauled out of water for the necessary maintenance, first of all the antifouling coating of the hull. ***The choice of Andrea has been Speedy Carbonium****, with the exclusive carbon technology for outstanding performance, particularly suited for racing and regatta sailboats. Applied with a spray gun Speedy Carbonium produces a perfectly smooth finish. After 24 hours it is possible to wet sand in order to improve the smoothness even more.*

ANTIFOULING PROTECTION OF THE HULL

To obtain the best result, it is essential to use the right quantity and therefore to apply the specified thickness of antifoulings. Antifoulings are soluble, if self-polishing or, if hard antifoulings, the biocides are leached out. Therefore the performance and the durability of antifoulings depend on the applied thickness.

HOW MUCH ANTIFOULING TO BUY?

When applying an antifouling, it is very important not to exceed the recommended coverage as well as to apply always two coats and a third coat on the rudder and other parts which are subject to faster erosion, such as the waterline.
In the table on the right side there is a precise method for calculating the quantity of antifouling you should buy and use. In this case you must know the dimensions of your boat: length at the waterline, maximum width and draught.

However, if you want to avoid too many calculations, you can use the table here below, which has been compiled according to our experience and to the information received from our customers. You will find a list of boat types together with the quantities of the product to be purchased using 0.75 liter cans. You should never exceed the theoretical coverage indicated in the technical data sheets.
It necessary to apply the correct quantity and the paint should not be "pulled" to obtain a higher coverage. When applying antifoulings, remember to always apply 2 coats and not to exceed the coverage of 8-10 m²/L for each coat. In other words, this means that for one coat you should use about one 0,75 can every 6 m².

To obtain the recommended total thickness of 80-100 microns, you should apply two coats of the product without thinner and using a brush. By using a roller you will obtain a lower thickness.

Fast calculation of the required quantity of antifouling

To calculate how much antifouling to use, first you have to know:

A. The boat's length at the waterline multiplied by the boat's width

B. The boat's length at the waterline multiplied by draught, the result by 2

C. The LONGITUDINAL COEFFICENT, which takes into account the shape of the hull:

modern sailboat with keel	**LC 0,35**
sailboats with full shaped hull	**LC 0,40**
fast semi-planing powerboats	**LC 0,65**
boats with dislocating hull such as pilot boats or trawlers	**LC 0,70**
inflatable boats	**LC 0,68**

The formula is: (A+B) x C= actual surface (m²) to paint

If you divide the result of the formula by the coverage of the antifouling, you have the quantity of antifouling to use (in liters).

	ADHERGLASS - 1 coat n° of 0,75 l cans				ADHERPOX - 1 coat n° of 0,75 l cans				ANTIFOULING - 2 coats n° of 0,75 l cans			
	Sailboats		**Motorboats**		**Sailboats**		**Motorboats**		**Sailboats**		**Motorboats**	
Length at Waterline (m)	With keel	With full shaped hulls	Fast semi-planing	With dislocating hull such as pilot boats or trawlers	With keel	With full shaped hulls	Fast semi-planing	With dislocating hull such as pilot boats or trawlers	With keel	With full shaped hulls	Fast semi-planing	With dislocating hull such as pilot boats or trawlers
6	1	2	2	2	1	2	2	2	3	4	4	4
7	2	2	2	3	2	2	2	3	4	4	5	6
8	2	3	3	3	2	3	3	3	5	6	7	8
9	2	3	3	4	2	3	3	5	6	7	8	10
10	3	3	4	5	3	3	5	6	7	8	10	12
11	3	4	5	6	3	5	6	7	8	9	12	14
12	4	5	6	7	5	6	7	8	9	11	14	17
13	4	5	7	8	5	6	8	9	10	12	16	19
14	5	6	8	9	6	7	9	10	12	14	18	22
15	6	7	8	10	7	8	9	12	13	16	20	24

ANTIFOULING PROTECTION OF THE HULL

If your boat is already protected with an antifouling coating in good condition and with proper adhesion, you can - after suitable cleaning - apply the new antifouling directly.
If you want to apply a different type of antifouling from Veneziani Yachting, please consult the compatibility table here below.
Generally, recoating self-polishing antifoulings with hard antifoulings should be avoided, since this could cause mechanical stresses between the coating layers, resulting in the loss of performance. If you have to recoat an unknown antifouling, remove it with AQUASTRIP or apply first a suitable sealer such as TICOPRENE (2 coats).

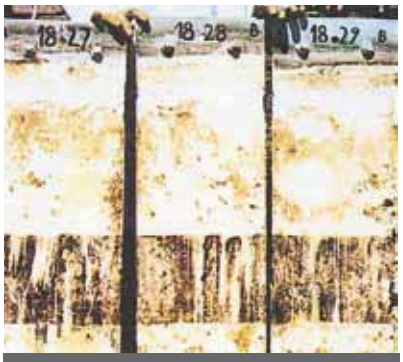
PREVIOUS antifouling \ NEW antifouling	ALUSPRINT	CUPRON PLUS	DRP100	EVEN EXCEL SPC	EUROSPRINT	MOBY DICK	RAFFAELLO	SEVENTY	SPEEDY CARBONIUM
ALUSPRINT	✓	✗	✓	✓	✗	✓	✓	✓	✗
CUPRON PLUS	✓	✓	✓	✓	✓	✓	✓	✓	✓
DRP100	✓	✗	✓	✓	✗	✓	✓	✓	✗
EVEN EXCEL SPC	✓	✓	✓	✓	✓	✓	✓	✓	✓
EUROSPRINT	✓	✓	✓	✓	✓	✓	✓	✓	✓
MOBY DICK	✓	✗	✓	✓	✗	✓	✓	✓	✗
RAFFAELLO	✓	✗	✓	✓	✗	✓	✓	✓	✗
SEVENTY	✓	✓	✓	✓	✓	✓	✓	✓	✓
SPEEDY CARBONIUM	✓	✓	✓	✓	✓	✓	✓	✓	✓

THE CORRECT THICKNESS

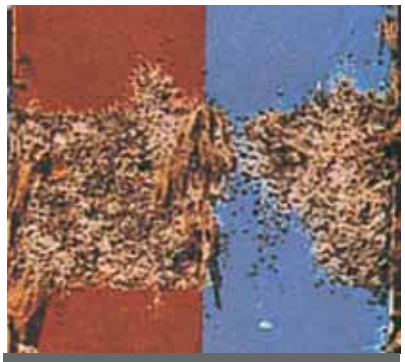
Before an antifouling from Veneziani Yachting is released on the market, it must pass a series of successful physical and chemical laboratory tests, as well as practical tests, the so called raft tests. These require the application of the antifouling on plates with standard sizes made of different materials.
Veneziani Yachting has a number of rafts in various locations, on which the raft test plates are mounted. Hundreds of plates are put to sea every year, some with Veneziani Yachting antifouling products already on the market, others with competitor's products, while new antifouling paints are tested on the remaining plates. The plates are inspected and photographed every 3 months; each test taking 2 years to complete. On completion of the tests, the formulations showing the very best results are chosen and further testing is started on some boats. Only antifoulings with the best results are released on the market.
One of the raft tests carried out by Veneziani Yachting laboratories requires painting the centre of the plates with only 1 coat of antifouling, and the remaining area with 2 coats. The pictures show that after 3 months there is no obvious difference, but after 1 year there is slime formation on the centre section, and after 2 years the centre section is covered with barnacles. This results confirm that the performance of an antifouling depends on the quantity of biocides released, and therefore on the thickness applied (thickness = quantity).

Raft test Veneziani Yachting

raft test after 3 months



raft test after 1 year


raft test after 2 years

ANTIFOULING PROTECTION OF SPECIAL PARTS

Metal keels, flaps, rudders, stern drives and propellers a usually defined as special parts. The surface of these parts is small, if compared to that of a boat, however, these parts require special care in order to avoid loss of performance or corrosion problems.

METAL KEELS, FLAPS AND RUDDERS

Flaps and rudders made of steel or alloys and other metal parts below the waterline are prone to abrasion, wear and corrosion . The surfaces (lead, cast iron or stainless steel) prior to be painted should be prepared by mechanical disc sanding or by grit blasting in order to remove all traces of old paint and rust.
Our recommended coating system consists of 1 coat of ADHERPOX and 3 coats of AQUASTOP applied with a short pile roller to attain a thickness of 600 microns. After the last coat has been applied, wait 48 minimum 72 maximum hours before sanding with fine abrasive paper and applying the primer for the antifouling.
As an alternative you can apply 3 coats of ADHERPOX and then the antifouling within a period from 24 hours to 3 months.

PROPELLERS (BRONZE) AND SHAFTS (STAINLESS STEEL)

When treating propellers you should be scrupulous, even fanatical, when carrying out cleaning and preparation.
Only thin coatings can be applied, in order not to affect the profile and therefore the performance of the propeller. Veneziani Yachting has formulated specific coatings for propellers, which can be applied at low DFT and which have very strong adhesion. The whole coating system should be renewed every season. The application procedure is as follows: sand with coarse grade sandpaper to achieve an anchor pattern and degrease with DETERSIL. Repeat the degreasing several times using a clean sponge and rinsing with fresh water.
Do not use solvents which will not eliminate grease but simply spread it on the surface. Take care not touch the clean surface with rags or fingers. Any remaining traces of grease can affect the adhesion of the coating.

STERN DRIVES

All boat motors are protected with a stove enamel by the manufacturer. However they should also be protected against fouling with a specific antifouling.
If the stern-drive is in good condition, wash the immersed part thoroughly with DETERSIL and, after sanding with fine abrasive paper, apply:

- 1 coat of PROPELLER PRIMER with brush.
- 2 coats of antifouling PROPELLER.

If the stern-drive is in a poor condition, you must strip it to the bare metal by sanding or, where possible, using an abrasive disc. Then it should be protected using ADHERPOX (1 coat with brush) and AQUASTOP (3 coats with a short pile roller or a brush).
Finish the system as for the immersed area.
On the parts above the waterline apply: 2 coats of GEL GLOSS PRO.

- apply 1 coat of PROPELLER PRIMER and after 6 - 12 hours, 2 coats of antifouling PROPELLER with a drying time of 6 - 12 hours between coats.

The antifouling PROPELLER should be applied only to PROPELLER PRIMER, or on top of well sanded old antifoulings. Wait at least 48 hours before launching.

Note: some alloys used for propellers are not suitable for coating.

DO THE PROPELLER FIRST

When you are painting the hull, coat the propeller first, not last. This procedure gives PROPELLER, a hard antifouling, more time to dry completely.

THE FINISH OF TOPSIDE, DECKHOUSE AND DECK

Prior to proceed with the application of the finish, in order to obtain the best result, an undercoat should be applied.

WHAT IS AN UNDERCOAT

The undercoat may be considered a close relative of the enamel, since it consists of the same components, but with a higher percentage of pigments and extenders. Sometimes an undercoat can be used instead of an enamel, when a mat finish is desired. The undercoat fulfils two tasks: provides enhanced protection and hides filled areas, avoiding discoloration defects of the enamel.
Furthermore, with the application of the undercoat it will be easier to locate possible surface defects to repair prior to the application the enamel. The undercoat should be applied to clean, sanded surfaces or to a suitable barrier coat.

When choosing an undercoat, you should keep in mind the substrate to be painted, the desired finish and the application method.

The undercoat provides a higher thickness than the enamel. Moreover, it is easier to sand. Last but not least, undercoats are cheaper than enamels and help to save on the quantity of enamel to purchase.

When using a polyurethane system the finish should be applied strictly within the specified recoat time, order to obtain maximum adhesion between the undercoat and the enamel. After surface preparation, primer application and filling, you should choose the most suitable undercoat for the desired finish.
Veneziani Yachting offers the following undercoats, which are well suited for all boat materials on the nautical market.

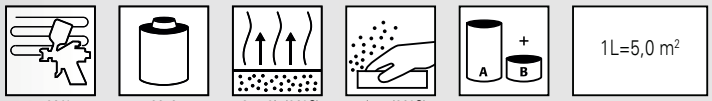
EUROGEL is an alkyd based, mat undercoat. Easy to use, this product has excellent hiding power and can be used a mat finish for interior boat surfaces or as an undercoat for alkyd enamels, such as Italia, Unigloss or Deck Finish. Eurogel can be applied, usually with brush, to existing one pack primers, previously sanded, or to stripped wood. Being easy to apply and well worth the price, Eurogel has widespread use in several fields.

EPOWAY is an epoxy undercoat for up to date coating systems, suitable for painting wood, gel-coat and metals, after application of a primer. Epoway can be applied by spray gun and has outstanding chemical, abrasion and water penetration resistance. Easy to sand, it can be recoated directly after 18 hours at 20° C. If the maximum recoat time has expired, sanding with 320 - 400 grade abrasive paper is recommended in order to obtain a perfectly smooth surface to be recoated with enamels such as Commander or Gel Gloss Pro.

POLYGOAL is a two-pack, high-build polyacrylic undercoat with excellent performance.
Easy to sand and therefore especially suitable as undercoat for top grade enamels. Being high-build, even one coat is helpful to mask possible micro-porosities of the substrate. Can be applied to previously sanded epoxy primers or fillers but also directly to properly sanded GRP or gel-coat. Polygoal - if applied as undercoat - enhances the gloss of polyurethane finishes. The white colour is the most used, however, being manufactured also with the tintometric system, Polygoal can be delivered with the same colour of finishes, such as Commander or Gel Gloss Pro.

EPOWAY - High-buil epoxy undercoat

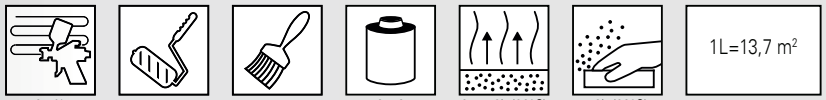
Two-pack epoxy undercoat with barrier effect, which can be applied to any kind of substrate (wood, steel, aluminium and GRP). This coating may be used both as barrier coat and as undercoat for enamels. Can be recoated, after sanding, with two-pack enamels. Colour: white. Packaging: 0,75/ 2,50 litres.



15-20% | 6610 | 18 - 72h (20°C) | 7days (20°C) | 4:1

EUROGEL - Matt enamel undercoat

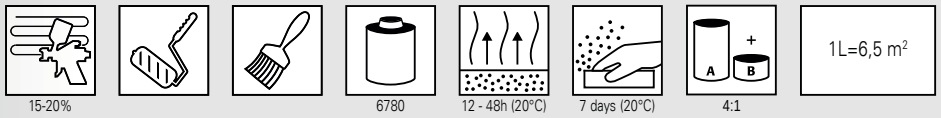
White one-pack alkyd undercoat. Easy to apply, has good hiding power and can be used as a mat finish for interiors or as undercoat for alkyd painting systems. Can be applied to aged one-pack alkyd systems and wood after sanding as well as to disc-sanded steel substrates. This product should not be used on inorganic zinc or galvanised panels. It is not suitable for continuous submersion in water. Colour: white. Packaging: 0,75/ 2,50 litres.



3-5% | 6470 | 24 - 48h (20°C) | 48h (20°C)

POLYGOAL - Polyacrylic undercoat

Polygoal is a two-pa , high-build polyacrylic undercoat with excellent performance. Easy to sand and therefore especially suitable as undercoat for top grade enamels. Since it is high-build, even one coat is helpful to cover possible micro-porosities of the substrate. It can be applied to previously sanded epoxy primers or fillers and also directly to properly sanded GRP or gel-coat. Polygoal is an excellent undercoat which enhances the gloss of polyurethane finishes. Packaging: 0,75 litres



15-20% | 6780 | 12 - 48h (20°C) | 7 days (20°C) | 4:1

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

THE FINISH OF TOPSIDE, DECKHOUSE AND DECK

The application of the enamel is the final step when painting your boat. The enamel shall provide chemical and mechanical resistance as well as satisfactory exterior appearance.

You can choose between a one-pack and a two-pack system. One -pack systems are the traditional choice for wooden boats. They are easy to apply and to maintain, however they are less resistant and less durable then two-pack systems. Two-pack systems provide excellent exterior appearance (gloss, durability, etc.) as well as better resistance against weathering and better mechanical abrasion resistance, but will require more care and commitment during the application. After the application of a protective primer, after filling and applying a suitable undercoat, Veneziani Yachting offers a broad range of both one-pack and two-pack enamels.
You can choose between the following one-pack enamels.

DECK FINISH is a professional, alkyd based enamel for decks and waterlines, providing excellent wear and abrasion resistance as well as resistance against weathering. DECK FINISH withstands periodic immersion service without loss of gloss and discoloration.

ITALIA is a glossy, alkyd based enamel, which can be applied to exterior and interior surfaces, providing good hiding power, excellent gloss and easy application with brush as well as durability in marine and industrial climate.

GUMMIPAINT is the enamel for the protection and the embellishment of inflatable boats.
If you follow the steps here below, you will obtain good results:

- carefully prepare the surface, degreasing and washing repeatedly with DETERSIL, in order to remove the wax used during the manufacture of inflatable boats.
- reduce the maximum air pressure by 20% for the application.
- sand the whole surface thoroughly with 120-150 grade paper and clean it with a wet cloth.
- when the surface is dry, apply 2 coats of GUMMIPAINT: for brush application add 5 -10% DILUENTE 6380, for spray application add 30 -50%.

UNIGLOSS is a one pack, high quality, alkyd-urethane finish, providing excellent levelling as well as colour and gloss retention. Suitable for exterior and interior surfaces made of wood and GRP, Unigloss is very flexible and has good adhesion to a wide range of primers, undercoats and finishes and is also used in several fields.

Veneziani Yachting offers the following two-pack enamels:

GEL GLOSS PRO is a high quality, two-pack polyurethane enamel with excellent resistance against the marine and industrial environment. Non-yellowing, very flexible and gloss-retaining.
The excellent leveling properties provide a perfect finish for topsides, decks and deckhouses. Gel Gloss Pro can be applied directly to gel coats as well as to epoxy or polyurethane primers.

For brush application, use cross strokes to obtain an even coat. Addition of DILUENTE 6700 or DILUENTE 6780 up to 10% by volume is recommended. The excellent leveling properties of this enamel produce a mirror-like and glossy surface.

For spray application add 25 - 35% DILUENTE 6700, if the temperature range is 18 - 30° C. If the temperature range is 12 - 18° C, use DILUENTE 6780. The first coat should wet the surface evenly but full hiding is not necessary. Apply the second coat with cross passes in order to obtain full hiding. The last coat, which is usually more diluted, should partially soften the previous coat in order aid the leveling of the finish. If the maximum recoat time of 48 hours is exceeded, sand the surface prior to proceed with the application.

On boat decks, in order to produce an anti-slip effect, add Antiskid Powder (maximum 6% by volume or 1,5% by weight) to both one-pack an two pack enamels. During the application the paint should be stirred often to avoid floating of the additive.

ANTISKID POWDER - granulated additive enamel paints

A specially granulated powder of an odourless plastic material for use as an antiskid additive to boat flooring and/or deck paints. It possesses excellent mechanical characteristics and resistance to the marine environment. Packaging: 0,15 Kg.

DECK FINISH - Deck finish for working boats

An modified alkyd finish for decks, boot toppings and bilges. This product is highly resistant to wear, abrasion and exposure to the marine environment. Deck Finish can be submerged again and again in sea water without losing its gloss and colour. It is very flexible and adheres well to a wide range of primers. Deck Finish is not suitable to be applied directly to galvanized panels and inorganic zinc primers. Colour: red, green. Packaging: 5 litres.

10-15%	3-5%	3-5%	6470	8h (20°C)	24h (20°C)	1L=12,8 m²	PRO

GEL GLOSS PRO - Two-pack polyurethane finish

A high quality enamel with excellent resistance to marine and industrial environment, to ageing and to ultraviolet rays. Does not yellow, is very flexible and retains its gloss. Excellent levelling gives improved aesthetic appearance to topsides, decks, superstructures etc. Gel Gloss Pro can be applied directly to gel coats or to epoxy or polyurethane primers (Epoply,Polygoal). A wide range of colours, which can be blended, is available. Not suitable for continuous water immersion. Colour: see colour chart. Packaging: 0,75 / 2,50 litres only white.

25-35%	5-10%	6780 (12°- 18°C) 6700 (18° - 30°C)	3 - 48h (20°C)	7h (20°C)	A + B 3:1	1L=15,4-13,5 m²

GUMMIPAINT - For rubber dinghies

Suitable for painting neoprene, rubber fabric, PVC, Hypalon, etc. This product has excellent levelling and flexibility while at the same time maintaining maximum adherence. Gummipaint is highly resistant to the marine environment, to immersion in salt and fresh water and to ultraviolet rays. Colour: see colour chart. Packaging: 0,375 litres.

30-50%	3-5%	6380	6h (20°C)	24h (20°C)	1L=6,6 m²

ITALIA - Professional enamel with high coverage

This is a glossy, finishing enamel for inside and outside which is based on alkyd resins modified with polymers dissolved in special solvents. The main characteristics are: high coverage, high gloss and durability. It is easy to apply with a brush, has perfect levelling and good colour retention. Because it does not contain lead or chromate it is classified as an non-toxic product according to EEC standards in force. It is particularly suitable for use in marine and industrial environments. Colour: see colour chart. Packaging: 0,75 / 2,50 litres.

5-10%	3-5%	6470	24h (20°C)	24-36h (20°C)	1L=12,5 m²	PRO

UNIGLOSS - One-pack high-quality enamel

One-pack alkyd-urethane finish. High quality, excellent dilatation and optimum colour and gloss retention. Suitable for use outside and inside pleasure crafts and houses. This product is very flexible and adheres well to a wide range of primers, undercoats and finishes. It cannot be directly applied to inorganic zinc primers or to galvanized panels. Available in various colours. Not suitable for continuous immersion. Colour: see colour chart. Packaging: 0,75 / 2,50 litres only white.

10-15%	3-5%	3-5%	6470	24h (20°C)	7days (20°C)	1L=13,8 m²

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

THE FINISH OF TOPSIDE, DECKHOUSE AND DECK

This section is dedicated to finishes for prominent boats over 15 meter. In this case enamels with superior gloss and durability are used, which require professional surface preparation and application. Veneziani Yachting offers the product range COMMANDER, formulated for this special task.

Only professional operators are able to carry out proper surface preparation and application of finishes on large areas.
Usually applied with spray gun, these special finishes require careful control of the working environment, suitable surface preparation, proper equipment and careful organization of the whole work, taking into account the following factors:

- Temperature of the working area, which will affect the viscosity of the paint during application and determine the choice of the thinner to be used. The temperature will also affect the drying of the finish and should be monitored carefully during and after application.

The choice of the undercoat depends on the substrate material, the desired result and on the application procedure. Air pressure, paint viscosity, number and thickness of coats, distance of the spray gun from the surface and spray technique depend on the experience and ability of the operator.

- Proper cleanliness of the working area, of the substrate and of the equipment shall be decisive for a good result. Good lighting from different angles is another important factor.

- In order to produce a smooth surface, filling and application of suitable undercoats will be necessary and shall be checked carefully prior to application of the finish.

- Air pressure, paint viscosity, number and thickness of coats, distance of the spray gun from the surface and spray technique depend on the experience and ability of the operator.

The COMMANDER product range consists of high-build, flexible polyacrylic enamels and varnishes with excellent gloss and colour retention. These finishes have also outstanding resistance against UV-rays, sea-climate as well as against abrasion. Formulated for spray application, easy to touch-up and to polish, they can be applied at high thickness, without sagging, directly to gel-coat or to undercoats such as EPOWAY or POLYGOAL after proper sanding.

There is the possibility to request special colours, manufactured with tintometric system according to samples. The range offers the following products:

COMMANDER is a two-pack high-build polyacrylic enamel with pastel colours, providing excellent gloss as well as outstanding colour retention. Easy to polish, this enamel has also excellent resistance against UV-rays, sea-climate as well as against abrasion.

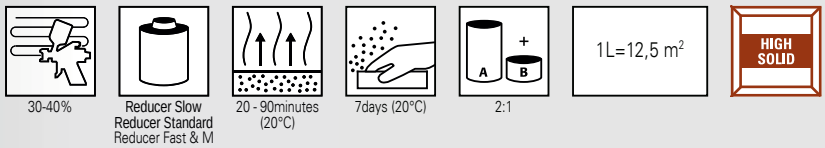
COMMANDER CLEAR is a two-pack high-build polyacrylic varnish for a double-layer finish. This varnish has excellent gloss and outstanding resistance against UV-rays and sea-climate. Can be applied directly to COMMANDER M, for a double layer system, or to polyacrylic enamels.

COMMANDER M is a one-pack metal-effect polyacrylic paint for a double-layer finish, to be top-coated with Commander Clear.

REDUCER SLOW, STANDARD and **FAST&M** are specific thinners able to reduce the viscosity, aid paint application and the correct film formation of the finish. Moreover, they make proper application at different temperatures possible.

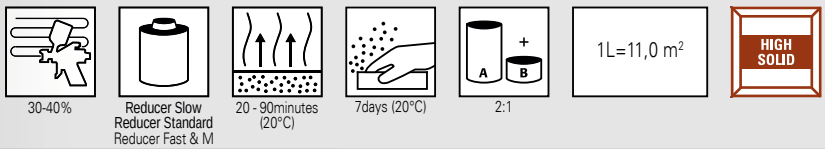
COMMANDER - Two-pack polyacrylic pastel-enamel

Commander is a two-pack high-build polyacrylic enamel with excellent gloss as well as outstanding colour retention. Easy to polish, this enamel has also excellent resistance against UV-rays, sea-climate as well as against abrasion. Can be applied directly to gel-coat, or to epoxy or polyurethane primers, such as Epoway e Polygoal. Not suitable for continuous immersion service. Colour: refer to colour table and to tintometric system. Packaging: 3,00 litres.



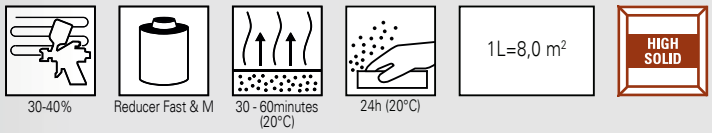
COMMANDER CLEAR - Two-pack high-buil polyacrylic varnish

Commander Clear is a two-pack high-build polyacrylic varnish for a double-layer finish. This varnish has excellent gloss as well as outstanding resistance against UV-rays and sea-climate. Can be applied directly to Commander M, for a double layer system, or to epoxy or polyurethane enamels. Not suitable for continuous immersion service. Colour: clear. Packaging: 3,00 litres.



COMMANDER M - One-pack polyacrylic metallic paint

Commander M is a one-pack metallic polyacrylic paint for a double-layer finish, to be top-coated with Commander Clear. Can be applied directly to epoxy or polyurethane primers such as Epoway, Polygoal. Colour: refer to the colour table and tintometric system. Packaging: 1,00 litres



REDUCER FAST & M - Fast reducer for COMMANDER, COMMANDER CLEAR and COMMANDER M

Thinners are volatile liquids used to dissolve paint components, reduce the viscosity and aid paint application. Suitable film formation depends on proper thinner evaporation, therefore the correct use of thinners is very important in order to achieve good paint application. Reducer Fast & M is the suitable thinner for the spray application of the enamel Commander and the varnish Commander Clear at a temperature range from 15° to 18° C and at all temperatures for Commander M. Packaging: 0,50 litres.

REDUCER SLOW - Diluente lento per COMMANDER E COMMANDER CLEAR

Thinners are volatile liquids used to dissolve paint components, reduce the viscosity and aid paint application. Suitable film formation depends on proper thinner evaporation, therefore the correct use of thinners is very important in order to achieve good paint application. Reducer Slow is the suitable thinner for the spray application of the enamel Commander and the varnish Commander Clear at a temperature range from 25° to 35°C. Packaging: 0,50 litres.

REDUCER STANDARD - Diluente standard per COMMANDER E COMMANDER CLEAR

Thinners are volatile liquids used to dissolve paint components, reduce the viscosity and aid paint application. Suitable film formation depends on proper thinner evaporation, therefore the correct use of thinners is very important in order to achieve good paint application. Reducer Standard is the suitable thinner for the spray application of the enamel Commander and the varnish Commander Clear at a temperature range from 18° to 30° C. Packaging: 0,50 litres.

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

THE FINISH OF TOPSIDE, DECKHOUSE AND DECK

The most precious parts of your boat are those made of wood, which are also the most prone to deterioration and therefore require special care. Varnished surfaces require specific coating systems and their durability depends also on periodic maintenance. If, every two years the varnished surfaces are sanded with fine abrasive paper and painted with 2 coats, you will have well protected wood in perfect condition.

When you are painting wood on your boat, you can choose between two different products:

TIMBER GLOSS, a traditional one-pack varnish, suitable for interior and exterior surfaces, which provides a glossy coating with excellent leveling, flexibility and good resistance to marine climate. Timber gloss is recommended for painting all types of wood above the waterline and can be applied also to old varnishes in good condition.

WOOD GLOSS and **WOOD MAT** (only for interior surfaces) have better resistance to weathering than conventional varnishes, and therefore provide longer durability. If the wood is new, it should first be sanded and then impregnated with 1 coat of FIBRODUR, prior to the application of the finish. For best results, at least 6-8 coats of TIMBER GLOSS or WOOD GLOSS should be applied, with light sanding (360-400 grade sandpaper) between coats, to obtain a smooth, mirror-like surface. On some prominent boats, as many as 12 coats are applied in order to achieve superior finish and durability. The first coats of varnish should diluted with 30% thinner, then the percentage of thinner should be reduced gradually. The final two coats should be applied without thinner. During application, always brush longitudinally to the grain of the wood. If the wood is stained by water infiltration, you must remove the paint from the affected area and treat the wood with oxygenated water (80 volumes) or with TEAK 2, until the wood regains the original colour.

HIGH PERFORMANCE SYSTEM

For high performance varnish systems, to new or stripped wood apply first one coat of FIBRODUR, sand after 12 hours drying time and then apply 2 coats of RESINA 2000. Sanding between the two coats is recommended in order to smooth the wood fibers. The surface is now ready for the application of 6 coats of WOOD GLOSS as mentioned above. This system can be renewed at a later date by recoating with WOOD GLOSS without removing the RESINA 2000. This system should be applied only to completely dry wood.

TEAK

The teak has always been considered a noble and precious wood and grows in South-East Asia. Colour and veining may vary depending on the area of origin and the quality. The best quality teak shows a uniform golden colour sometimes with black veining. This wood has an oily feeling when touched, a strong and typical smell and is one of the most durable woods in the world, practically immune to attacks by insects and very resistant to water contact.
Due to its beauty, durability, resistance and ductility the teak is an excellent wood for manifold uses. The teak is the only wood which can be used in all areas of the world, even in those where thermal cycling, humidity, salinity and winds may affect all other wood types. Because of its excellent resistance to the marine environment, the teak is nowadays used mainly for the construction of boat decks and does not require any protective treatment. Moreover the teak is not stained if in contact with screws other metallic outfits. The only negative feature is the high price of teak, which restricts its use. On the other hand, the teak is the most suitable wood for the use in marine environment.

Teak and iroko are usually not varnished. They should be treated with natural oils to replace the components lost due to weathering and washing. We recommend the application of 1 or 2 coats of TEAK 3. However, this protection will be of limited duration and should be repeated twice per season. This procedure will avoid frequent cleaning and the wood will preserve its natural colour and natural properties.
Veneziani Yachting offers two products for thorough cleaning and reviving the natural colour of teak.
For cleaning: TEAK 1. Wet the wood with fresh water and then pour a small quantity of TEAK 1 onto the deck, rubbing it in with a natural fiber brush. Synthetic fiber brushes and abrasive detergents should be avoided. Rinse thoroughly with plenty of fresh water.
TEAK 2 to revive the natural colour. Apply TEAK 2 with a brush to the surface still wet from the previous cleaning operation with TEAK 1. When the wood changes colour, rinse it and let it dry. The wood should be protected as soon as possible with 2 coats of TEAK 3 which, being a protective oil, will preserve the integrity of the wood.

TIMBER GLOSS - Glossy wood varnish

A one-pack modified alkyd varnish , easy to apply, for inside and outside use. Varnish with excellent gloss, good levelling properties, brushability, flexibility and resistant to marine enviroments. Raccomanded for all wooden surfaces, over the water-line or on old coat of varnish. Colour: clear. Packaging: 0,75 / 2,50 litres.

15-50%	15-50%	15-50%	6470	8h - 7days (20°C)	12 - 24h (20°C)	1L=11,2 m²

WOOD GLOSS - Glossy wood finishe

A clear, two-pack, glossy varnish. Exceptionally resistant to atmospheric agents and the marine environment. Excellent levelling and resistance to abrasion. Enhances the beauty of the wood without problems of varnish shrinkage. Particularly recommended for the treatment of visible wood surfaces both inside and outside. Not suitable for surfaces which are continuously immersed. Apply several coats to obtain the best results in corrosive industrial or marine environments. Colour: clear. Packaging: 0,75 litres.

		6780	8 - 48h (20°C)	3days (20°C)	4:1	1L=19,0 m²

WOOD MAT - Semy-glossy wood varnish

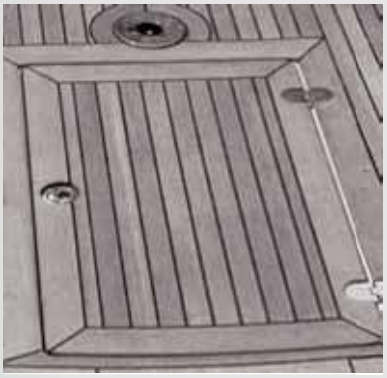
A clear, semi-glossy, two-pack varnish. Highly resistant to the marine environment. Particularly recommended for the treatment of bulkheads, furniture and all internal wooden surfaces. Excellent levelling and resistance to wear. Easy to apply. Not suitable for surfaces which are permanently immersed. Excellent for wooden decking and planking. Colour: clear. Packaging: 0,75 litres.

15-50%	15-50%	6780	8 - 48h (20°C)	3days (20°C)	1:1	1L=16,7 m²

TEAK 1

Detergent and stain remover for teak

Teak 1 removes all kind of contaminations from wood. The pH of Teak 1 only slightly alkaline, therefore it cleans thoroughly, removing the soil but leaving the "oily" content of the wood unharmed. Colour: colourless. Packaging: 0,50 litres.



TEAK 2

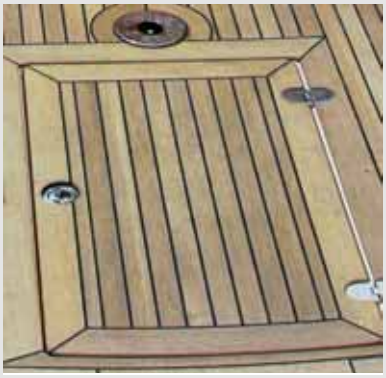
Bleaching agent for teak

Sunlight, salt and pollution affect the original appearance of teak resulting in a greyish colour. With Teak 2 the wood regains its original colour. Colour: colourless. Packaging: 0,50 litres.

TEAK 3

Impregnating and protective agent for teak

Teak 3 besides impregnating wood and reducing soil penetration, restores the natural oil content of wood. Furthermore Teak 3 enhances the natural colour of teak and makes the surfaces softer to touch. Colour: colourless, gold. Packaging: 0,50 / 2,5 litres.



For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

INTERIORS

These are hidden spaces of the boat, which are not "open to view" and therefore often neglected and just painted to hide rust or dirt. However, it is important to coat also these areas properly in order to avoid penetration of humidity and consequent problems.

PEAKS, ICEBOXES

Many forepeaks and storage rooms are used for storing sail-bags but sometimes used also as galleys and in this case the food should come in contact with clean surfaces.

For this reason, Veneziani Yachting has formulated CERAMITE YACHTING, a solvent-free product, which is easy and safe to apply in confined areas, since there will be no solvent vapours. Ceramite Yachting provides good hiding power, hardness and complete impermeability. Resistant to fuel and mineral oils, it can be cleaned easily with a normal liquid detergent or a bilge detergent since its surface is hard and glossy. In new GRP boats, Ceramite Yachting eliminates the strong, unpleasant odour of fiberglass and can be applied directly to degreased and washed surfaces.

In metal boats, after surface preparation, apply a primer such as ADHERPOX and then finish with CERAMITE YACHTING. In wooden boats, apply 1 coat of FIBRODUR and then finish with 2 coat of CERAMITE YACHTING. The same procedure can be used for water tanks and iceboxes.

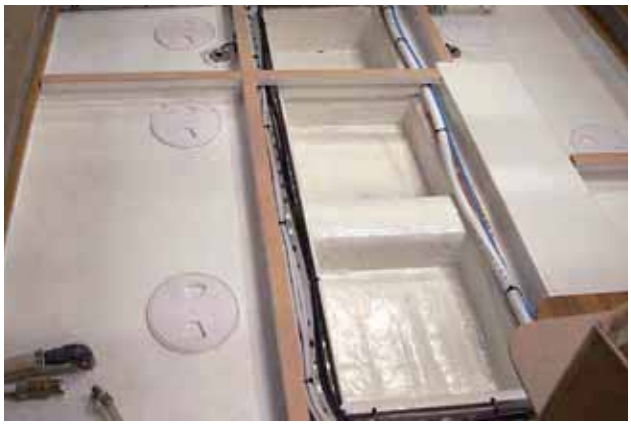
For a professional protection of ice boxes, refrigerating cells, potable water tanks and galleys use ECOPLAST, an epoxy coating suitable for contact with foodstuff. This product is certified for the contact with food, potable water, fresh or refrigerated fish, mollusks, shellfish etc.

ECOPLAST complies with D.M. 21/3/1973 (concerning the hygiene of containers and equipment in contact with foodstuff) and D.M. 06704/2004 n° 174 (concerning materials and equipment to be used for collecting, treating and distributing potable water). ECOPLAST is solvent-free and odour-less, easy to apply also in confined spaces, providing excellent water and chemical resistance.

BILGES

For very confined bilges it is possible to use a one-pack, odour-less product such as SENTIFLEX, which is a glossy topcoat formulated with special polymers conferring good chemical resistance against humidity, lubricating oils, fuels and detergents. This product produces very little smell during application and can be applied to GRP, wood, steel and aluminum. It is easy to apply and has excellent hiding power as well as leveling.

This product should be applied to clean, dry and oil free surfaces. If necessary, sand prior to application. For new wood: impregnate first with FIBRODUR.



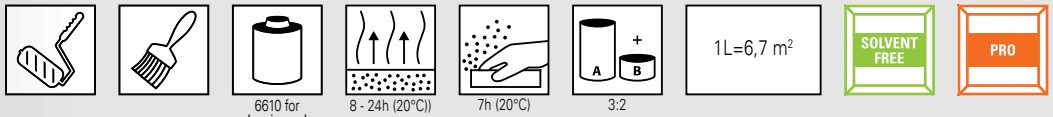
For new gel-coat: Degrease with DETERSIL, sand and apply the product. For new steel and aluminum: first apply one coat of ADHERPOX or TICOPRENE. If applied to old, one-pack coatings remove all loose paint scales by scraping. Usually no thinner is required. If necessary, add up to 5% DILUENTE 6470 by volume. Apply an even coat with full coverage, wetting the surface thoroughly. For best results, apply at least 2 coats with a minimum drying interval of 8 hours at 20° C.

CERAMITE YACHTING - Barrier coating for internal use

A high-build, odourless epoxy paint which is solvent-free for the internal and external treatment of any surfaces which need to be sealed, such as water tanks, galleys and cool boxes. Used in antiosmosis systems as a sealant for bilge, fore and aft peaks and hidden internal surfaces. This product is also suitable for use on wood and steel and has a high chemical resistance to fresh and salt water, diesel, oil, and acidic and basic solutions. Ceramite Yachting is easily cleaned with an ordinary liquid detergent as it has a hard, glossy surface. Colour: white. Packaging: 0,75 litres.

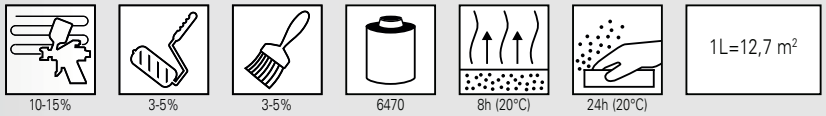
ECOPLAST - Epoxy coating for cool boxes

Epoxy coating for internal use where there is contact with foodstuffs. Recommended for the treatment of iceboxes, cool boxes, galleys and drinking water containers. This product is certified for use with foodstuffs, in particular drinking water, fresh and refrigerated fish, molluscs, crustaceans, etc. Ecoplast is an odourless, solvent-free product which is easy to apply even in confined areas. This product is a sealant and a barrier paint with a high resistance to chemical agents. Ecoplast conforms to D.M.21/3/1973 (concerning hygiene in packaging, containers and utensils intended to come into contact with foodstuffs) and DM 06/04/2004 n.174 (concerning materials and equipment used in facilities for the containment, treatment, conveyance and distribution of drinking water for human use). Colour: white. Packaging: 2,50 litres.



SENTIFLEX - One pack enamel for bilge

Glossy enamel based on specially resins that confers good chemical resistance, in particular to the humidity penetration, oils, fuel and detergents. This enamel, odorless, can be applied directly on, upon preparation, GPR, wood, steel and aluminium. Easy to apply, has a good coverage power with excellent levelling. Colour: grey. Packaging: 0,75 litres.



THINNERS

Thinners are volatile liquids used to dissolve paint components, reduce the viscosity and aid paint application. Suitable film formation depends on proper thinner evaporation, therefore the correct use of thinners is very important in order to achieve good paint application. In the case of two-pack paints add thinner only after the mixing of the two components. Instructions indicated in technical data sheets and regarding the correct use of thinners for different application procedures (brush - roller- spray) should be followed precisely and the maximum recommended percentage should never be exceeded.

- **DILUENTE 6380**, thinner for the GUMMIPAINT range, for brush and spray application.
- **DILUENTE 6470** is the recommended thinner for all antifouling paints from Veneziani Yachting as well as for all one-pack paints such as DECK FINISH, EUROGEL, ITALIA, MINIAX PLX, PROPELLER PRIMER, SENTIFLEX, TICOPRENE, TIMBER GLOSS, UNIGLOSS. For STUCCO VELOX it is recommended only for the cleaning of equipment.
- **DILUENTE 6610**, thinner for epoxy paints. Recommended thinner for ADHERPOX, EPOWAY and UNIKOTE PRO. For AQUASTOP, CERAMITE YACHTING, ECOPLAST, for all EPOMAST fillers, RESINA 2000 and SUBCOAT S it is recommended only for the cleaning of equipment.
- **DILUENTE 6700** is the specific thinner for the enamel GEL GLOSS PRO for brush and spray application.
- **DILUENTE 6780**, thinner for polyurethane paints. Recommended thinner for POLYGOAL, WOOD GLOSS, WOOD MAT, GEL GLOSS PRO. For ADHERGLASS and FIBRODUR it is recommended only for the cleaning of equipment.

For additional information please consult the technical data sheets of the desired products. Pictures and size of cans shown are only indicative.

Durepox

The Choice of Champions

Durepox is a free sanding, highly pigmented, two-pack epoxy urethane primer, recommended when uncompromising protection of the boat is required. One outstanding property of this two-pack coating is his flexibility and strong adhesion to all types of substrates.

Durepox has been used for decades not only for boats but also in the aeronautical industry and has undergone successfully very tough tests in New Zealand, where the UV-exposition is one of the highest in the world. Best suited for regatta boats which do not require antifouling, Durepox has been some kind of revolution for regatta boat painting.
Tests carried out in the flux laboratories of the Obago University in New Zealand have confirmed that surfaces treated with Durepox, have a 15% reduction of the drag coefficient if compared to conventional finishes.

Durepox can be applied directly, or after suitable surface preparation, to all boat building materials such as steel, galvanized steel, aluminum, wood, gel-coat, GRP and carbon fiber. Available is also DUREPOX HIGH PERFORMANCE CLEAR, designed to improve the gloss of surfaces painted with all colours of DUREPOX or to be applied directly to bare substrates of carbon fiber.

"The platform was spectacular, the boats were spectacular, the regatta field was nearly perfect with a marvelous background and the fans could watch the competition closely."

This was 34th America Cup organized in San Francisco and Durepox was again the Choice of Champions, being an important part of the coating systems for all 4 Challenger boats of the Louis Vuitton series and the Amarica Cup final. We can hardly wait to be involved in the preliminary meetings with some the possible teams competing in 35th edition.

Robert Hini, Operation and Export Manager,
RESENE AUTOMOTIVE & LIGHT INDUSTRIAL

"Durepox is the only one or one of the few primers, which we use and which can withstand the tough condition to which our masts are exposed. All competition equipment from Southern Spars is painted with Durepox. The same has been done also for the carbon fibre. In this case Durepox shines out, if compared to other primers. It is not necessary to apply it a high thickness for a good result. There are several other areas where Southern Spars uses Durepox, which cannot be made public owing to privacy agreements with our clients."

Nigel Marchant, Southern Spars

Compared to other primers for boats, Durepox has a lower specific weight. Originally available in the colours black, white, grey and red, Durepox can now delivered on request in nearly all colours.
Applied wet to wet and quick drying, Durepox may increase considerably the speed of boats to which it is applied. Moreover, Durepox provides also high impermeability and long durability.

Durepox has been applied to the hulls of some of the most renowned regatta and cruise boats. From the first boat of the NZ team until today, when the product is specified in the AC72 for American Cup Challenges, Durepox has protected the winning teams.

"Durepox 2K primer is the best invention after sliced bread. It is the only system which goes from bare substrate to finish application for high performance boats with minimum weight increase.
Easy to apply, to sand and to repair, Durepox is the best choice for the Volvo Ocean Race and the America Cup. Durepox is the only coating system I recommend and use for regatta boats."

Chris Mellow, Construction Manager for
SWE63 & SWE73
Victory Challenge Sweden (AC2003)
ESP88 Desafio Espanol (AC2007)

Resene
Automotive & Light Industrial

Emirates TEAM NEW ZEALAND
TEAM SUPPLIER

DUREPOX 2K PRIMER PAINTING FLOW CHART

Durepox The Choice of Champions

Plan a paint meeting including all stakeholders from faring, paint process & signage. Clearly understand what is expected of the entire paint scheme before work is started. How many colours, in what order are they to be applied to the fillers through to top coats. Understand from the outset what is expected, is the final finish to be sanded?, is the finish to be clearcoated for example. START WITH THE END IN MIND and backwards plan what is to be completed on what given day.

SUBSTRATE

Carbon fibre

Large surface area

Male or female mould

PREPARATION

1. Remove all initial mould release agents. Degrease with RAPC Wax & Grease Remover. C Power is also very good for water borne contaminants with its citrus base. Hot water & detergent pressure wash also works very well.

2. Grit Blast with Garnett Grade C to 30 micron profile. DO NOT recycle grit.

3. Long or short board to desired shape with P80 grit or coarser finishing with P150 grit.

4. Fill visible fine pin holes and any low points with desired filling faring compound.

5. Long or short board to desired shape with P80 grit or coarser finishing with P150 grit.

PRIMER FILLER

Air blow and clean down always wearing gloves and clean lint free cloths using the wipe on wipe off method changing cloths frequently.

1. Apply 2 High Build coats of Durepox Grey by roller and or airless spray, depending on equipment a start point mix ratio of 4:1:1 or less thinner if required.

2. Identify small pinholes and squeegee or brush over as seen.

3. Allow 24hr cure at temp above 20 deg C.

4. Using higher temperatures for thermal curing will shorten cure times.

SANDING & FARING

1. After full cure apply an even all over guide coat.

2. Long or short board to desired shape with P80 grit or coarser finishing with P180 grit.

3. Apply fillers if needed for pinholes and low points.

4. Air blow and clean down always wearing gloves and clean lint free cloths using the wipe on wipe off method changing cloths frequently.

PRIMER SURFACER

1. Apply 2 wet even coats 25-30 microns only.

2. Suggest 4:1:2 as a mix ratio guide.

3. Suggested gun set up 1.4 mm. Gravity or pressure pot.

4. Allow 24 hr cure at temp above 20 deg C.

5. Using higher temperatures for thermal curing will shorten cure times.

FINAL SAND

1. Final sand by hand or machine to remove guide coast finishing with P400 grit.

2. Inspect for sand throughs or pin holes.

3. Fill any missed pin holes and spot prime any rub throughs.

4. Air blow and clean down always wearing gloves and clean lint free cloths using the wipe on wipe off method changing cloths frequently.

5. Apply IPA\DI Water mixed 80% IPA & 20% DI Water.

6. Air blow and clean down always wearing gloves and clean lint free cloths using the wipe on wipe off method changing cloths frequently.

COLOUR COATS

1. Mask by hand or spray mask starting with the smallest surface area colour first.

2. Allow 24 hr cure at temp above 20 deg C.

3. Using higher temperatures for thermal curing will shorten cure times.

4. Apply all other colours in agreed sequence.

5. Pay particular attention to accurate masking and edge to edge of all colours.

6. Final sand for racing finish or alternatively apply Durepox High Performance Clear to the over all surface area.

DECK & COCK PIT AREA

1. Follow step 1 & 2 of prep process.

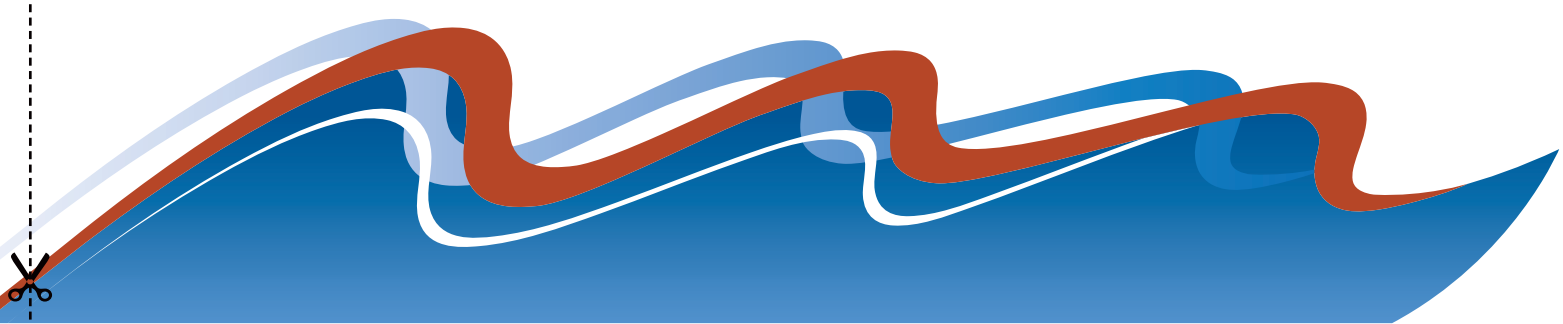
2. Apply Durepox with Deck Grip in appropriately masked out areas with large 2.5 to 3 mm gun set up.

3. Mask out any other colours and apply Durepox as per agreed paint and colour scheme.

Point to note: By adding 10% By Volume of Durepox High Performance Clear to Durepox colours will greatly enhance clean ability and visual appearance. Keels, Appendanges, Masts etc follow prep method depending on degree finish required.Lead Bulb: Clean \ Sand \Clean \ use a high build epoxy primer \ over night cure\sand with P150 followed by Durepox.

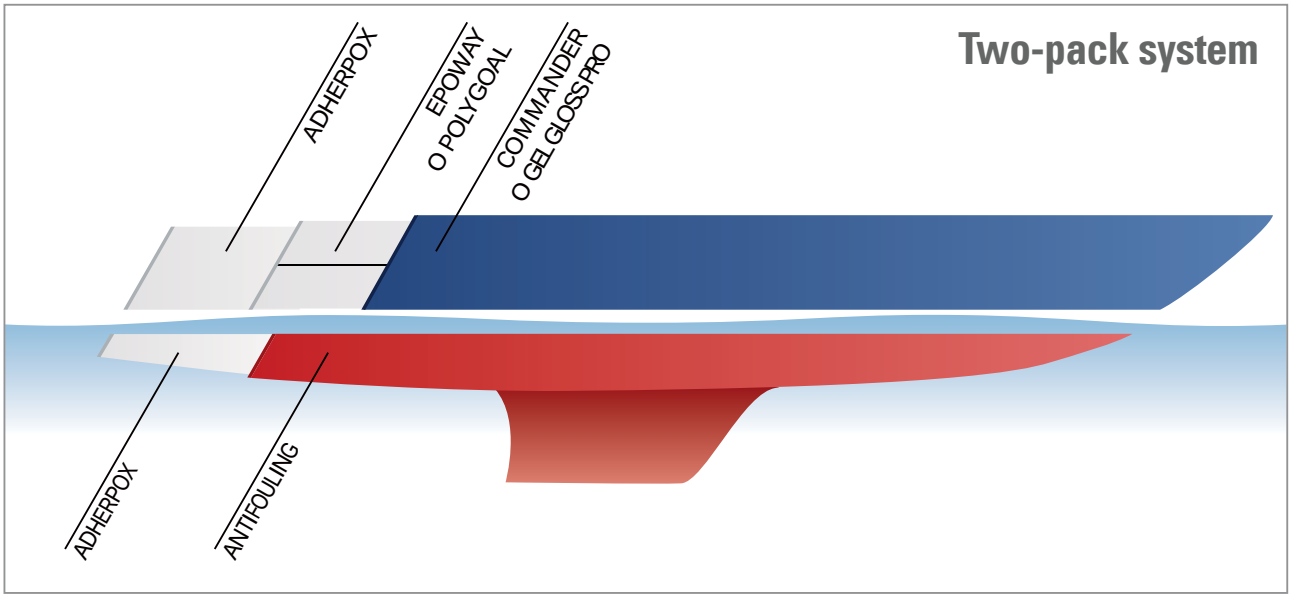
YACHTING Veneziani™

PAINT SYSTEMS



FOR NEW OR STRIPPED BOATS

METAL



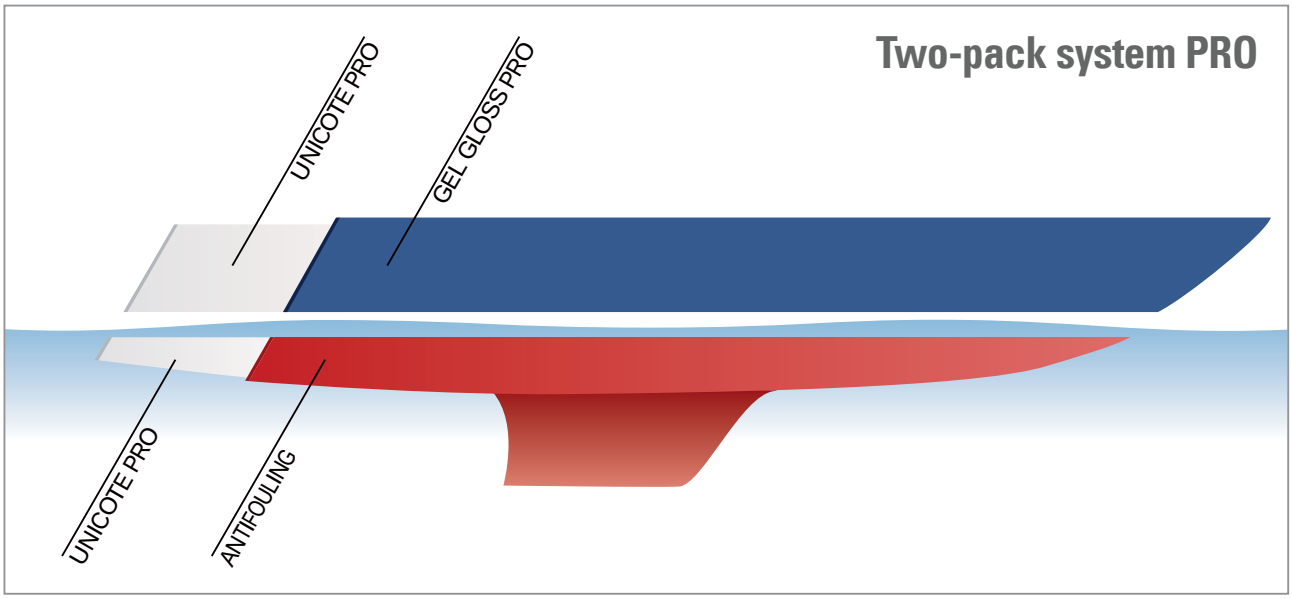
TOPSIDE

- ☐ 1 coat of **ADHERPOX** (DFT 100 microns, theoretical coverage 6,0 m²/L)
- 1 coat of **EPOWAY** (DFT 100 microns, theoretical coverage 5,0 m²/L)
  or
  1 coat of **POLYGOAL** (DFT 100 microns, theoretical coverage 6,5 m²/L)
- 2 coats of **COMMANDER** (DFT 50 microns, theoretical coverage 12,5 m²/L)*
  or
  2 coats of **GEL GLOSS PRO** (DFT 40 microns, theoretical coverage 13,5 m²/L)*

* For deck painting add **ANTISKID POWDER**

HULL

- ☐ 3 coats of **ADHERPOX** (DFT 100 microns, theoretical coverage 6,0 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)



TOPSIDE

- 1 coat of **UNIKOTE PRO** (DFT 150 microns, theoretical coverage 5,3 m²/L)
- 2 coats of **GEL GLOSS PRO** (DFT 40 microns, theoretical coverage 13,5 m²/L)*

* For deck painting add **ANTISKID POWDER**

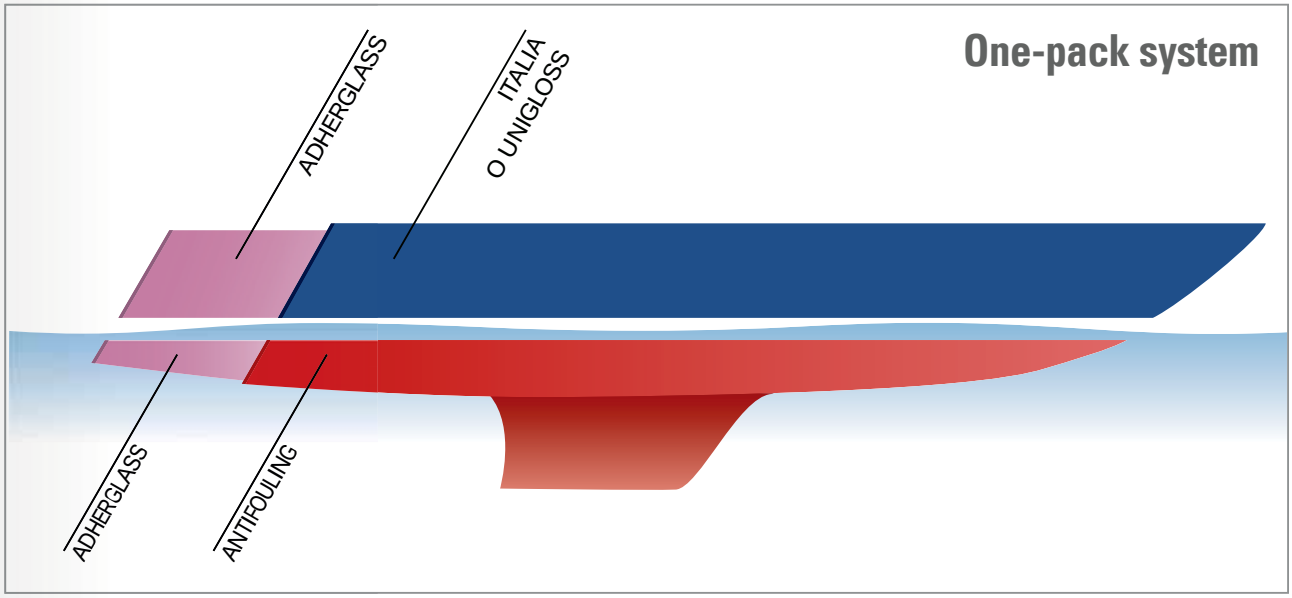
HULL

- 2 coats of **UNIKOTE PRO** (DFT 150 microns, theoretical coverage 5,3 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)

DFT and theoretical coverage indicated are for single coats

FOR NEW OR STRIPPED BOATS

GRP AND COMPOSITES

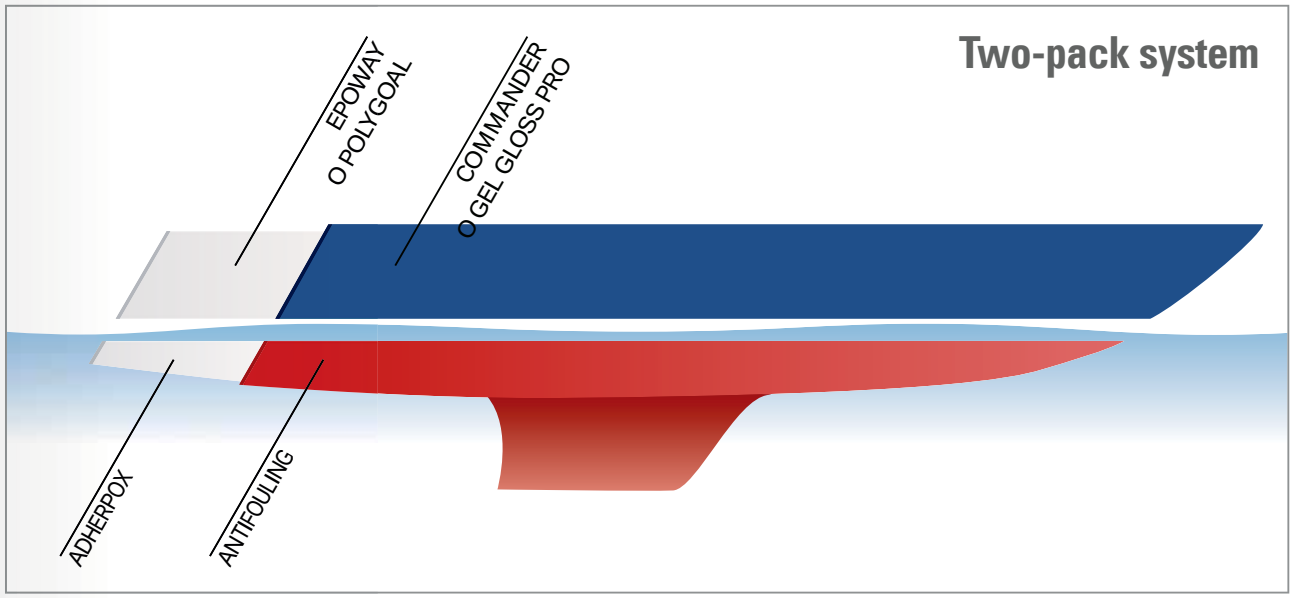


TOPSIDE

- 1 coat of **ADHERGLASS** (DFT 15 microns, theoretical coverage 13,3 m²/L)
- 2 coats of **ITALIA** (DFT 40 microns, theoretical coverage 12,5 m²/L)
  or
  2 coats of **UNIGLOSS** (DFT 40 microns, theoretical coverage 13,8 m²/L)

HULL

- 1 coat of **ADHERGLASS** (DFT 15 microns, theoretical coverage 13,3 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)



TOPSIDE

- 1 coat of **EPOWAY** (DFT 100 microns, theoretical coverage 5,0 m²/L)
  or
  1 coat of **POLYGOAL** (DFT 100 microns, theoretical coverage 6,5 m²/L)
- 2 coats of **COMMANDER** (DFT 50 microns, theoretical coverage 12,5 m²/L)
  or
  2 coats of **GEL GLOSS PRO** (DFT 40 microns, theoretical coverage 13,5 m²/L)

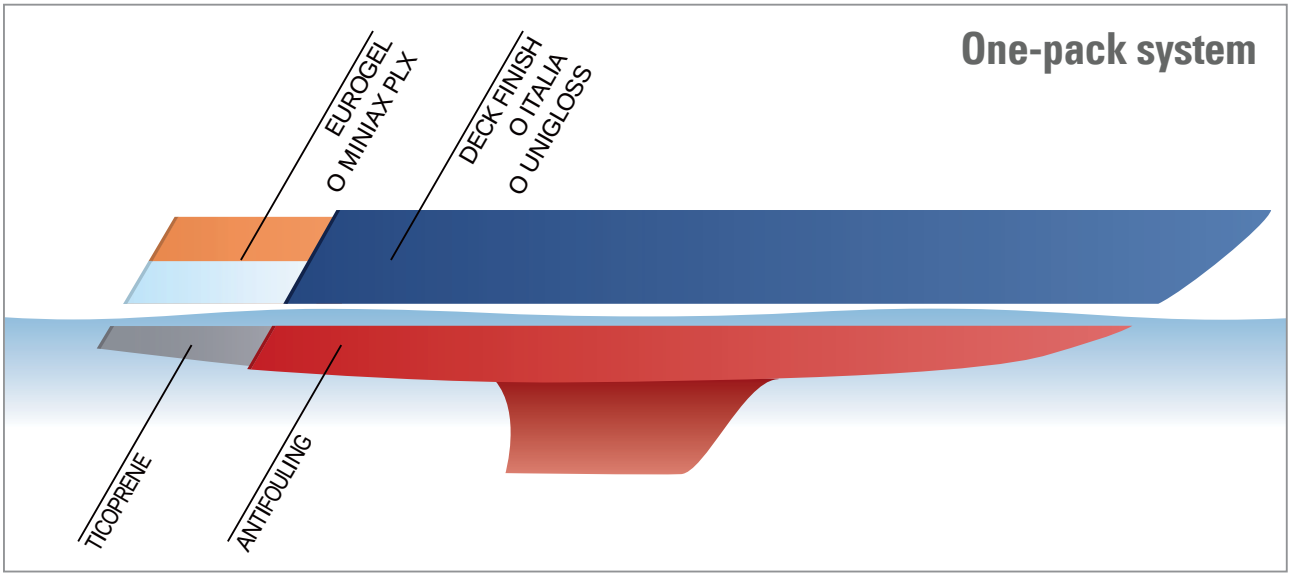
HULL

- 1 coat of **ADHERPOX** (DFT 50 microns, theoretical coverage 12,0 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)

DFT and theoretical coverage indicated are for single coats

FOR NEW OR STRIPPED BOATS

WOOD



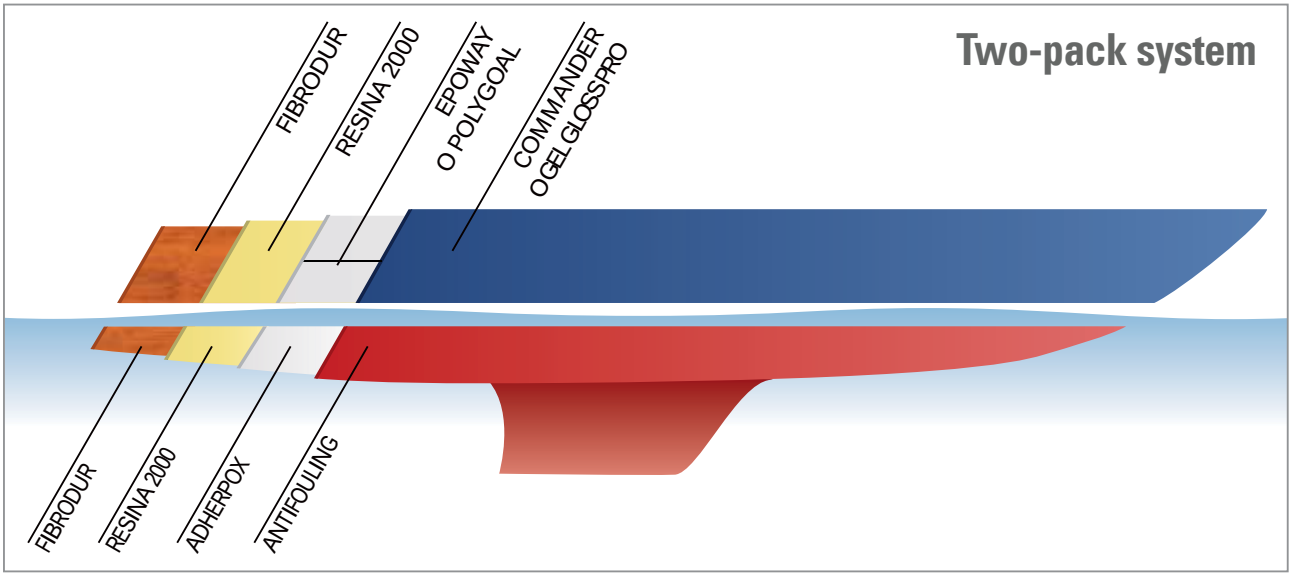
TOPSIDE

- 1 coat of **EUROGEL** (DFT 45 microns, theoretical coverage 13,7 m²/L)
  or
- 1 coat of **MINIAX PLX** (DFT 40 microns, theoretical coverage 11,3 m²/L)
- 2 coats of **DECK FINISH** (DFT 40 microns, theoretical coverage 12,8 m²/L)*
  or
- 2 coats of **ITALIA** (DFT 40 microns, theoretical coverage 12,5 m²/L)
  or
- 2 coats of **UNIGLOSS** (DFT 40 microns, theoretical coverage 13,8 m²/L)

HULL

- 4/5 coat of **TICOPRENE** (DFT 50 microns, theoretical coverage 6,4 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)

* For deck painting add **ANTISKID POWDER**



TOPSIDE

- 1 coat of **FIBRODUR** (DFT 20 microns, theoretical coverage 12,5 m²/L)
- 2 coats of **RESINA 2000** (DFT 100 microns, theoretical coverage 10,0 m²/L)
- 1 coat of **EPOWAY** (DFT 100 microns, theoretical coverage 5,0 m²/L)
  or
- 1 coat of **POLYGOAL** (DFT 100 microns, theoretical coverage 6,5 m²/L)
- 2 coats of **COMMANDER** (DFT 50 microns, theoretical coverage 12,5 m²/L)*
  or
- 2 coats of **GEL GLOSS PRO** (DFT 40 microns, theoretical coverage 13,5 m²/L)*

HULL

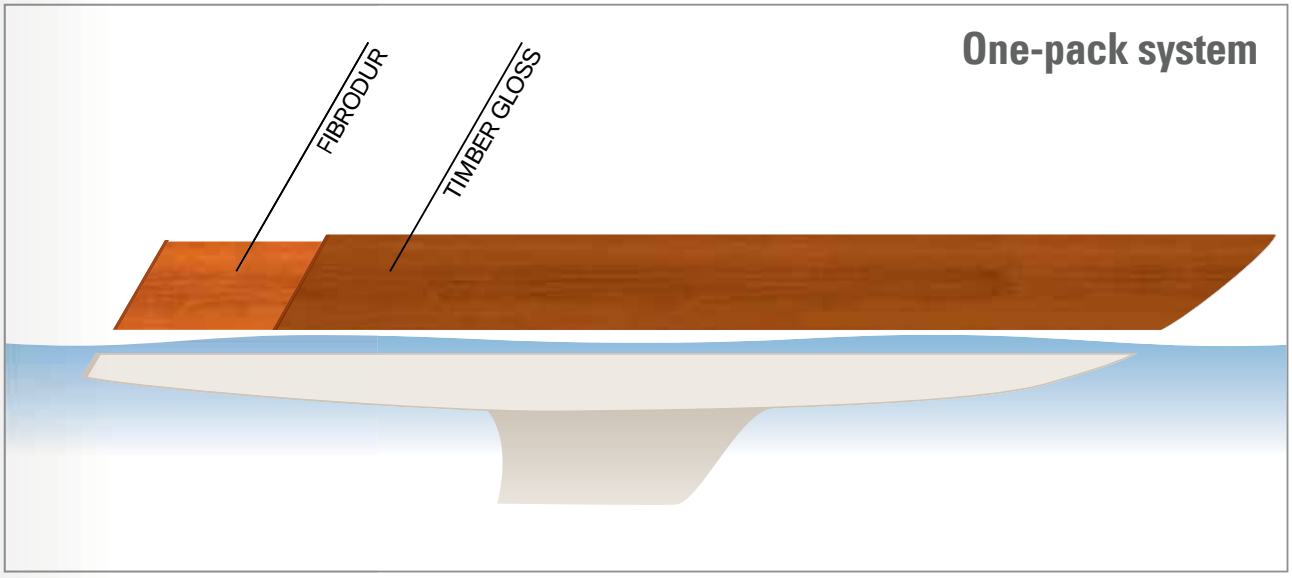
- 1 coat of **FIBRODUR** (DFT 20 microns, theoretical coverage 12,5 m²/L)
- 2 coats of **RESINA 2000** (DFT 100 microns, theoretical coverage 10,0 m²/L)
- 1 coat of **ADHERPOX** (DFT 50 microns, theoretical coverage 12,0 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)

* For deck painting add **ANTISKID POWDER**

DFT and theoretical coverage indicated are for single coats

FOR NEW OR STRIPPED BOATS

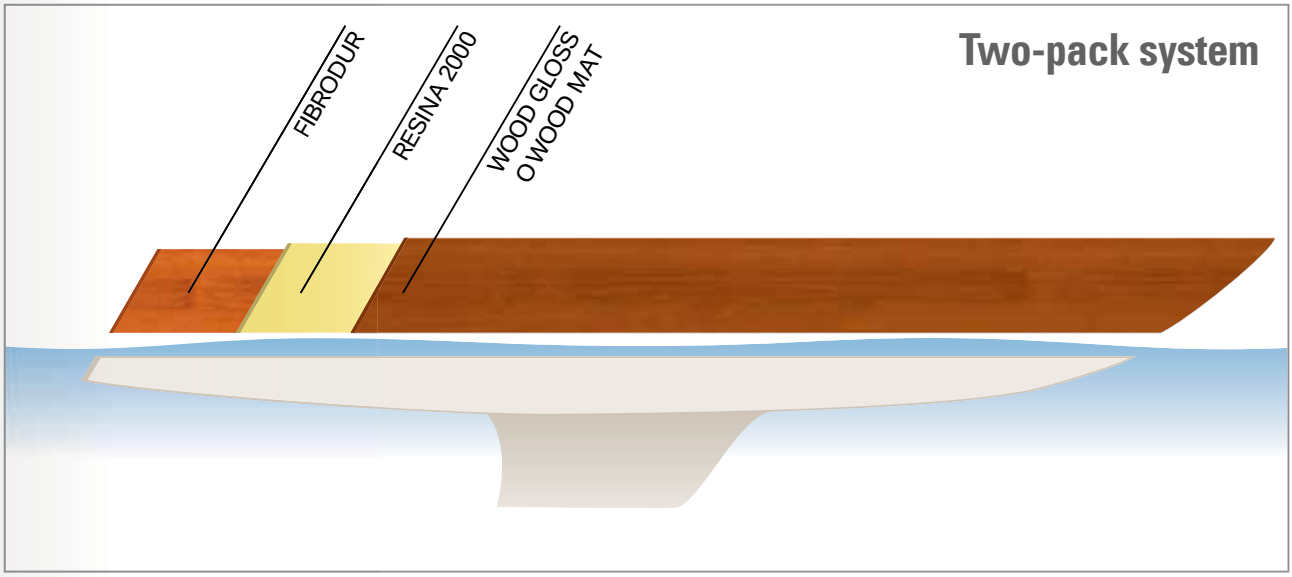
VARNISHED WOOD



TOPSIDE

- 1 coat of **FIBRODUR** (DFT 20 microns, theoretical coverage 12,5 m²/L)
- 6/12 coats of **TIMBER GLOSS** (DFT 40 microns, theoretical coverage 11,2 m²/L)*

* For deck painting add **ANTISKID POWDER**



TOPSIDE

- 1 coat of **FIBRODUR** (DFT 20 microns, theoretical coverage 12,5 m²/L)
- 2 coats of **RESINA 2000** (DFT 100 microns, theoretical coverage 10,0 m²/L)
- 6/12 coats of **WOOD GLOSS** (DFT 20 microns, theoretical coverage 19,0 m²/L)*
  or
- 6/12 coats of **WOOD MAT** for interiors only (DFT 30 microns, theoretical coverage 16,7 m²/L)

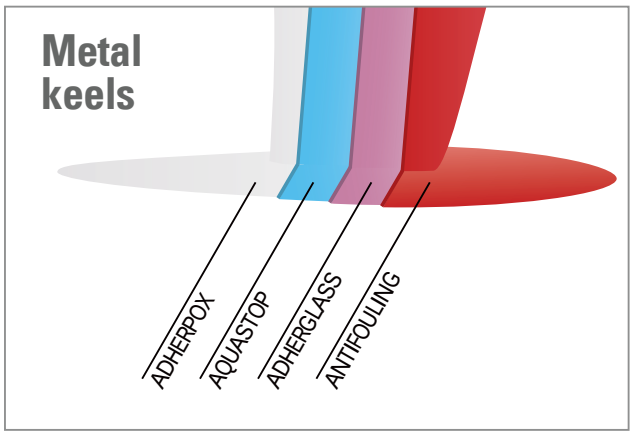
* For deck painting add **ANTISKID POWDER**

DFT and theoretical coverage indicated are for single coats

FOR NEW OR STRIPPED BOATS

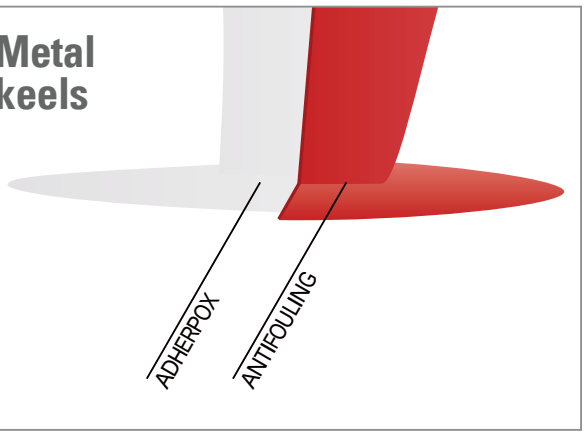
SPECIAL PARTS

Metal keels



- 1 coat of **ADHERPOX** (DFT 50 microns, theoretical coverage 12,0 m²/L)
- 3 coats of **AQUASTOP** (DFT 200 microns, theoretical coverage 5,0 m²/L)
- 1 coat of **ADHERGLASS** (DFT 15 microns, theoretical coverage 13,3 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)

Metal keels



- 3coats of **ADHERPOX** (DFT 100 microns, theoretical coverage 6,0 m²/L)
- 2 coats of **ANTIFOULING** (DFT and theoretical coverage depending on antifouling type used)

Peaks, galleys, ice boxes and bilges

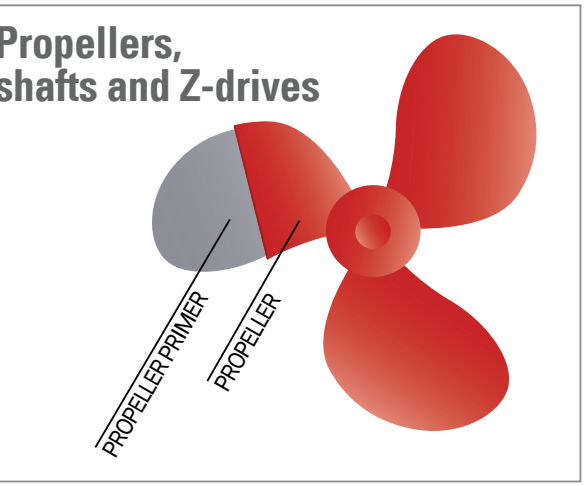
Two-pack system:

2 coats of **CERAMITE YACHTING** o **ECOPLAST**
(DFT 150 microns, theoretical coverage 6,7 m²/L)

One-pack system:

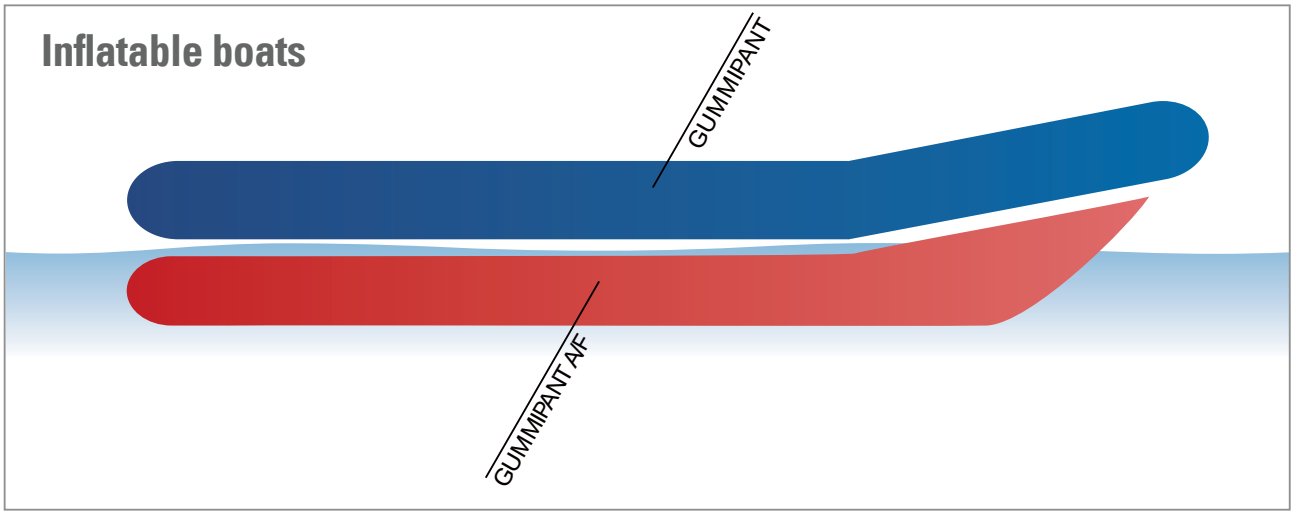
Only for peaks and bilges: 2 coats of **SENTIFLEX**
(DFT 40 microns, theoretical coverage 12,7 m²/L)

Propellers, shafts and Z-drives



- 1 coat of **PROPELLER PRIMER** (DFT 15-20 microns, theoretical coverage 19 -14,5 m²/L)
- 2 coats of **PROPELLER** (DFT 30 microns, theoretical coverage 15,0 m²/L)

Inflatable boats



- Non submerged inflatable parts: 2 coats of **GUMMIPAINT** (DFT 35 microns, theoretical coverage per coat 6,6 m²/L)
- Submerged inflatable parts: 2 coats of **GUMMIPAINT A/F** (DFT 18 microns, theoretical coverage per coat 15 m²/L)

Rigid GRP hull: Refer to the hull paint system for GRP boats

DFT and theoretical coverage indicated are for single coats

MAINTAINING MY BOAT

In the paint system section, for graphic simplification, the boat has been divided in hull, waterline and topside. When performing a painting job with Veneziani Yachting products, take note of the main data on the sheet below. This memorandum will help you not only to remember the different steps of the job, but also make the application of products during future jobs easier.

Name .....

Brand .....

Length .....

Year of manufacture .....

Displacement .....

Work description	Product	Quantity	Date	Remarks

NECESSARY TOOLS

Besides the tools listed in the table here below, remember to wear always the following protective equipment: mask, protective glasses, one-way gloves.

OVAL BRUSHES N° _____

FLAT BRUSHES N° _____

ANGLED BRUSHES N° _____

FINE BRUSHES N° _____

SHORT PILE ROLLERS N° _____

LONG PILE ROLLERS (OR FOAM ROLLERS) N° _____

ROLLS OF ADHESIVE TAPE N° _____

COARSE SANDPAPE (SHEETS)
60 N° _____
80 N° _____
100 N° _____
120 N° _____

MEDIUM SANDPAPER (SHEETS)
180 N° _____
220 N° _____

FINE SANDPAPER
320 N° _____
400 N° _____

BASINS FOR ROLLER APPLICATION N° _____

SCRAPERS N° _____

FILLING KNIVES N° _____

SPONGES N° _____

RAGS N° _____

SPECIFIC THINNER FOR EACH PRODUCT N° _____

GRADUATED BEAKERS N° _____

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