sikkens

MAINTENANCE GUIDE

Premium Yacht Paint

GIVE YOUR BOAT

THE VIP TREATMENT

For all GRP, wood, steel and aluminium yachts.

One-pack, two-pack and combination systems.

Everything about surfaces and preparation.

How much paint?

How much thinner?

Which tools?

The complete colour programme.

And a wealth of practical tips!

CONTENTS

FOREWORD

YOUR BOAT & SIKKENS: A SOLID TEAM!

Your boat needs a lot of tender loving care to make sure it looks its best and to protect it against the very elements that give you so much pleasure: the sun, the wind and the water.

GRP or wood, steel or aluminium – all only retain their strength and good looks if carefully protected. Yet the coatings protecting them are just fractions of millimetres thick. That's why it's so important these coatings are made of the right materials and are applied properly. Even with the best products, you need to know how and when to use them to get the best results.

This Sikkens Maintenance Guide tells you everything you need to know. Moreover, it also explains which system you should use, the tools you will need, the temperature you should work at, how much thinner is required – and lots more besides.

It's crammed with handy DIY tips. And it also will help you avoid making mistakes that may spoil the final result.

Work systematically

Choose your system and the products you need carefully. Read this booklet thoroughly before you begin. You'll find this is an essential step if you really want to achieve the goal you've set your heart on: achieving a perfect outcome.

Quality at competitive prices

Sikkens products can call on a centuries-old Dutch boat-painting tradition and the expertise provided by Akzo Nobel's state-of-the-art research facilities. You can be sure our products are always one step ahead of the competition.

Careful maintenance using quality products may involve a major investment but you'll find it's worth every penny. What's more, this maintenance guide will enable you to achieve long-lasting, beautiful results, at a price to suit your pocket.

Talk things over with your Sikkens Yachtpaints VIP dealer

Not only will he be able to supply you with the materials you require, he can provide expert advice as well. And if you can't find a solution together, call Sikkens direct on +31 10 503 3545. We'll be only too happy to help!

Note: *This guide was correct at time of printing. Any subsequent product range changes will be incorporated into the next edition.*


FREYA

GUIDE

HOW TO USE THIS MAINTENANCE GUIDE

LOOK OUT FOR THE ICONS IN THE TEXT – YOU'LL FIND THEM AN IMPORTANT SOURCE OF ADDITIONAL HELP!

Important tip for this part of your work

Take special care – something could go seriously wrong here!

Further information will be found on the page referred to

See the product information on the page referred to

Don't be put off by the size of this booklet. If, for instance, your boat has a GRP hull, just skip all the information about wood and steel boats. And you certainly won't have to repeat each job every year – unless, of course, your boat is being built or has been completely stripped down.

Take a few minutes extra

Once you've found the topic you're interested in, read the relevant section through once. It may take a few minutes more than if you'd just leafed through the pages and found the answer to your specific question. But it's worth it because in the process you might come across other important information – and that means better preparation, and a better result.

Follow the 6-step plan

If you follow the 6-step plan below when you use this guide, you can be sure you won't miss any of the wealth of information it contains. If anything is unclear or you have a query, contact your dealer or Sikkens for detailed advice.

YOUR 6 STEP PLAN TO USING THIS GUIDE		PAGE
Step 1	The first step is to decide whether to use a one-pack, two-pack or combination system. Your choice will mainly depend on initial requirements: is it new work or a repaint job? Or just maintenance (repainting) or repair work? You can then choose an appropriate system, taking into account your quality requirements and your budget.	*8*
Step 2	Read the chapter entitled 'Before you begin.' This will help you plan your work, ensure you haven't missed anything and help you to prepare yourself properly.	*10*
Step 3	Find the chapter containing the systems and work plans for the material your boat is made of. **GRP and wood epoxy** **Wood** **Steel/Aluminium** If you're going to be painting the underwater hull or parts other than the topsides, read the following chapters: **Antifouling** **Systems for other parts of your yacht**	 *19* *26* *32* *37* *41*
Step 4	Read the specifications for the products you are going to be using.	*45*
Step 5	Choose the colour you want.	*inside back cover*
Step 6	Fill in your maintenance log. That way you will always know exactly what has been done, with what system and with what products.	*51*

PAINT SYSTEMS

ONE-PACK, TWO-PACK OR A COMBINATION SYSTEM?

Whether you choose a one-pack, two-pack or combination system depends chiefly on three factors:

1. The surface on which you'll be working.
2. The quality and durability you are seeking.
3. Your budget.

1. Which surface will you be working on?

Is the boat you're working on completely new and unpainted? Or are you completely stripping down and repainting your boat? Either way, you will have a choice between a one-pack and a two-pack system.

If you are painting over an existing layer of paint you will need to know what that existing layer consists of.

If you are painting over a two-pack system you can always use another two-pack system or, in some cases, a one-pack system (after applying a tie coat). The latter approach would create a combination system.

For painting over a one-pack system, generally speaking only a one-pack system can be used.

What is the existing coat of paint?: P12 & P13

2. Your desired level of quality and durability

Two-pack systems offer much better quality and durability than one-pack systems, but they need a lot of extra attention as well. Only by following the instructions carefully can you achieve a good result.

The chart shows the relative performance of the three types of paint system: a one-pack system, a two-pack system, and a combination system (one-pack over two-pack).

3. Your budget

Two-pack paints are considerably more expensive per litre than one-pack paints. They also have approximately one-third less hiding power. You will find, however, that the longer service life (which means less work!) will compensate for this additional investment. And don't forget the 'quality return': greater resistance to damage and longer colour retention.

	ONE-PACK SYSTEM	TWO-PACK SYSTEM	COMBINATION SYSTEM (2 + 1)
Ease of application	●●●●●	●●	●●●
Ease of maintenance	●●●●●	●●	●●●●●
Gloss	●●●●●	●●●●●	●●●●●
Wear and scratch resistance	●●●	●●●●●	●●●●
Servicing life (opaque system)	2-4 Years	5-7 Years	4-6 Years

- *Two-pack systems require a stable surface. If the material your boat is made of is 'mobile,' as it will be if it's made up of laths or individual components, opt for a one-pack system, as this is far more flexible than a two-pack system.*

BEFORE
YOU BEGIN

To achieve the best results, good preparation is essential. In the long run this makes the whole job easier and speeds up the process.

If you ignore any of the preparatory steps, or don't carry them out properly, the final result can be very seriously impaired, especially in terms of appearance and durability.

That's why we've included a checklist of preparations and pre-treatments, plus a shopping list. Take it with you when you go to buy your materials, tell your dealer what your plans are, and go through the list with him. After all, nothing is more annoying than to find out, half way through a job, that you haven't got something you need, or that you've bought the wrong product.

Checklist of preps and pre-treatments:

1. *Is the working climate right for my work?*
2. *What surface am I going to be working on, and how should I pre-treat it?*
3. *Cleaning, sanding, removing old coats of paint.*
4. *Filling.*
5. *How much paint do I need and what kind?*
6. *How much thinner do I have to add, and which one?*
7. *What tools and other gear do I need?*
8. *Safety and the environment.*

The following sections look at each of these detail.

1. The working climate: temperature, atmospheric humidity, ventilation, wind and sun

Temperature and atmospheric humidity

We recommend working at a temperature of between 15°C and 25°C and a maximum atmospheric humidity of 85%. Sikkens paints are easy to apply at high or low temperatures, but you need to take particular care if the atmospheric humidity is higher than 85%. If you don't have a hygrometer handy, wet the surface to be painted. If it is not dry after a quarter of an hour don't go ahead with the painting. You should also postpone painting if the temperature is below 5°C, if the weather is foggy, or if condensation forms.

The work plans later on in this guide give minimum overcoating times and thinning ratios for 20°C, 12°C, and 5°C.

For maximum overcoating times please see individual product data sheets

- *The lower the temperature, the more viscous the paint will be. If you use too much thinner the drying time will be considerably longer and the thickness of the coat will be impaired. In this situation it is better to allow the paint to reach the required temperature indoors and then use it as quickly as possible. Alternatively, put the can in a basin of tepid water.*

BEFORE YOU BEGIN

Ventilation and wind

If you are working indoors and there isn't enough ventilation, the solvents in the paint can remain suspended in the air. The drying time also becomes longer and blistering can occur. You should therefore make sure there is adequate ventilation, while avoiding draughts. If working outdoors in a strong breeze, the paint will dry too fast to flow properly, leading to streaky or lumpy results. You also run the risk of dust settling on the paint.

Sun

Avoid working in direct sunlight. Even in cold weather the layer of paint can become so warm it dries too quickly or the solvent becomes 'locked in' under a hard crust. In a nutshell: always avoid extreme weather conditions as far as possible.

- *If the surface of your boat is much colder than the surrounding air, moisture in the air can cause condensation to form. As a result, the paint will not be able to adhere or will have a dull appearance when it dries. This can cause particular problems when painting outside in the morning in good weather when the temperature is low.*
- *If you are using a two-pack system at high temperatures, take care not to mix too much paint at a time or put the can in a bucket of tepid water. This will stop the paint going hard.*

2. Which surface will you be working on?

Check the old layer of paint

Establish whether the old layer of paint still adheres well to the surface. To do this, attach strips of good quality adhesive tape at various places and pull them off using a certain amount of force. If fragments of paint adhere to the tape the old layer must be removed to make sure the new coat will have a good adhesive surface.

Not sure whether you've got a one-pack or a two-pack paint on your yacht? Select an area of the paint surface and proceed as follows. Soak a cloth or some cotton wool with Sikkens PU Brush Thinner. Hold against the paint surface at the same spot for a couple of minutes. If the surface becomes soft or wet it is a one-pack paint. If the paint is scarcely damaged it is two-pack paint. If you're still not sure, ask an expert for advice.

3. Cleaning, sanding and removing old layers of paint

Always clean the surface thoroughly first

Even if you're going to sand the surface, always clean and degrease thoroughly first. Otherwise dirt and grease can enter the surface leading to problems such as poor adhesion. New surfaces too must always be cleaned first. If you pour water over the surface and it runs off again smoothly without drops forming, the surface is sufficiently grease-free.

Sikkens offers a very effective and easy-to-use product for cleaning painting surfaces.

- *Never apply a coat of two-pack paint over a coat of one-pack paint.*

Sanding

The purpose of sanding is to remove any unevenness and roughen up the surface to be painted so that the new coat of paint can adhere to it properly. If the maximum recoating time has elapsed (see label) always sand first.

Dry sanding creates a lot of dust, which can create problems later when you start painting. If you decide to dry sand, preferably use a machine with an extraction fan. Wet sanding is usually faster, partly because the abrasive paper has to be changed less often provided you keep it wet.

The dust from sanding must be completely removed from the surface with a brush and water. Wait until completely dry before you begin painting.

- *Antifouling coats must be sanded wet. Dry sanding dust from an antifouling is hazardous to health.*
- *Do not wet sand coats of filler.*

BEFORE YOU BEGIN

CHOOSING THE RIGHT ABRASIVE PAPER		
	DRY	WET
Sanding off paint residue after stripping down	P36 - P80	P150 - P180
Sanding the filler	P120 - P220	–
Sanding prior to the first coat of primer	P150 - P180	P220 - P280
Sanding between coats of primer	P120 - P220	P180 - P280
Abrading the gelcoat	P150 - P180	P220 - P280
Sanding prior to the topcoat	P280 - P400	P600 - P800
Before repairing the coat of varnish	P400	P800

Removing old layers of paint.

If stripping surfaces completely, it may be quicker to use a paint remover (only for one-pack paints) rather than sanding. Make sure no paint remover or paint residues are allowed to enter the surrounding ground.

Place some sheeting down under the boat to catch anything that falls and dispose of paint residues separately from the waste water. Old antifouling paints containing heavy metals should be treated as chemical waste.

4. Filling

Use filler to repair any holes and eradicate any scratches or unevenness. This produces a more attractive final result. Sikkens fillers are of exceptional quality for both one-pack and two-pack systems. Build up the filler in layers.

Use one-pack filler for a bare sanded surface and two-pack filler as a priming coat. For larger holes, use putty filler to fill the holes. After sanding, finish off with a coat of fine-grained finishing filler.

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5. How much paint do I need?

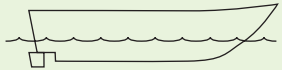
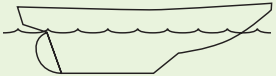
The amount of paint required is stated in the product system work plan in square meters per litre. As these figures apply to a single coat, you will need to multiply the total number of litres required by the number of coats. This is also given in the tables.

- *If you have more paint left over than you calculated, we recommend you apply an additional coat.*

How do you calculate the number of square meters for each surface to be painted? Use this table to calculate a rough estimate. To find out how many litres you will require for each coat, divide the surface area by the spreading rate in m^2 per litre. Note the amounts indicated are averages.

A rough surface has a larger surface area and will therefore require more paint. Some surfaces absorb more paint than others do. In cold conditions, or if insufficient thinner has been added, more paint will be required.

CALCULATING THE SURFACES TO BE PAINTED

UNDERWATER HULL	FORMULA	
 *Motor yachts with a shallow draught*	WLL x (W + D) = SURFACE AREA IN M^2	
	..... x (..... + ...) = ...	
 *Sailing yachts with a moderate draught*	0.75 x WLL x (W + D) = SURFACE AREA IN M^2	
	0.75 x ..... x (..... + ...) = ...	
 *Sailing yachts with a deep draught*	0.5 x WLL x (W + D) = SURFACE AREA IN M^2	
	0.5 x ..... x (..... + ...) = ...	
TOPSIDES	(OAL x W) x 2 x height from waterline to deck = SURFACE AREA IN M^2	*OAL – overall length*
	(..... x .....) x 2 x ..... = ...	*WLL – waterline length*
DECK	(OAL x W x 0.75) = SURFACE AREA IN M^2 NB: Subtract from this figure the surface area of the superstructure	*W – width*
	..... x ..... x 0.75 = ...	*D – draught*

6. How much thinner do I need to add?

The product system tables state the recommended amount of thinner for each product at 20°C. At low temperatures you can use a little bit more thinner to get the paint to flow a bit more easily, but make sure you don't overdo it!

Too much thinner lengthens drying time and can lead to insufficient layer thickness. For further information on this point, see 'Working climate'.

7. What equipment and other gear do I need?

The right equipment will enable you to apply the paint evenly with the right flow and coat thickness thus ensuring optimum adhesion. You can choose between brushes, rollers, and spray guns.

- *When using two-pack products, add thinner only after the two components have been well mixed.*
- *Use only the thinner indicated for each type of paint. If you don't, the result may be ruined.*

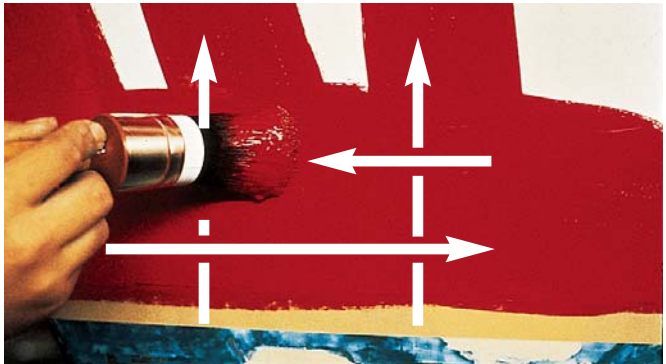
Working climate: P11 & P12
Which thinner should I use?: P50

Brushes

Brushes are suitable for all surfaces and paint systems, and are the tools of choice for all first coats.

The pressing and sweeping action of the brush helps the paint to penetrate better into the scratch marks left by the abrasive paper, thus achieving optimum adhesion. Always use the largest brush possible for the job, and always use one with fine, tapered hairs. The best quality brushes lose hardly any of their hairs, but to be on the safe side, you should avoid using a new brush for the topcoat. Rub a new brush firmly backwards and forwards across some abrasive paper or adhesive tape to remove any loose hairs.

A good quality brush will more than pay for itself. It will produce splendid results with less effort and will also last longer. Start by applying the paint in vertical strokes. Then spread horizontally and diagonally until the paint is evenly distributed across the surface.



Finally, brush lightly from bottom to top to avoid leaving any brush marks. Do not apply more paint than you can comfortably spread before the paint starts to dry. Paint can also dry on the brush. Cleaning the brush approximately once every half an hour will prevent this.

Rollers

Paint rollers are more suitable than brushes for painting large surfaces. Lambs wool rollers leave an orange peel effect and are less suitable for use above the waterline. Brushing over with a flat brush after you have finished with the roller can help solve this problem. Mohair rollers and foam rollers produce a better result. However, foam rollers quickly deteriorate when using two-pack paints and are satisfactory only if regularly replaced. Use a roller to apply the paint in the same way as you would a brush: first vertically, and then horizontally and diagonally until the paint is evenly distributed. Brushing over with a paintbrush after you have finished with the roller can often make the result even more attractive.

Spray guns

A highly satisfactory result can be achieved with spray guns, but they must be used with great skill, using professional spraying equipment and specialist personal protective equipment, in an air-conditioned area with extraction fan. If you cannot meet these requirements yourself, leave the spraying to a professional yacht painter.

Cleaning your tools

Always clean your painting tools thoroughly after use. They will thus retain their effectiveness and will last longer. You can always clean your tools with the thinner you have used.

▶▶ *Page 50*

- *Before you purchase your paint, go through the shopping list once more to make sure you have not forgotten anything.*
- *Wet the ground under the boat to prevent dust from rising.*
- *Make sure that you have everything you need for your painting work so that you don't need to stop half way through.*
- *Always stir the paint thoroughly first and repeat this from time to time.*
- *If you are not going to use the whole can of paint, pour the quantity of paint you need into a clean can.*
- *It's easier if you work in twos: one person applies the paint, the other spreads it.*
- *Remove masking tape before the paint is completely dry. That way you'll get a nice clean dividing line.*

BEFORE YOU BEGIN

SHOPPING LIST

CLEANER	DECK PAINT	BRUSHES
SOLVENT/THINNERS	ANTIFOULING PAINT	ROLLERS
PAINT REMOVER	MIXING STICKS	PAINT BASIN
PRIMING MATERIALS	ABRASIVE PAPER	MASKING TAPE
FILLER	DUST MASK	PROTECTIVE SHEETING
PUTTY KNIVES	SAFETY GOGGLES	CLEAN, EMPTY POTS
ENAMEL	DISPOSABLE GLOVES	

8. Safety and the environment

General rules for your health and safety:

- *Always open cans of paint carefully.*
- *Clean up any spilled paint immediately.*
- *Don't eat or drink or keep unwrapped food in the vicinity of paint or coats of paint that are still wet.*
- *Always wear gloves when working with paint, thinner and paint removers.*
- *When dry sanding always wear a suitable dust mask.*
- *If necessary, wear safety goggles.*
- *Make sure you have sufficient ventilation and/or fume extraction equipment.*
- *Always read the information on the product label about safety and the environment. If anything is unclear to you, or you have any questions, contact your dealer or Sikkens.*

Symbols on the cans provide important warnings for safe use:

HARMFUL
This product can be harmful if inhaled, ingested, or brought into contact with the skin. The label will show what the precise risk is.

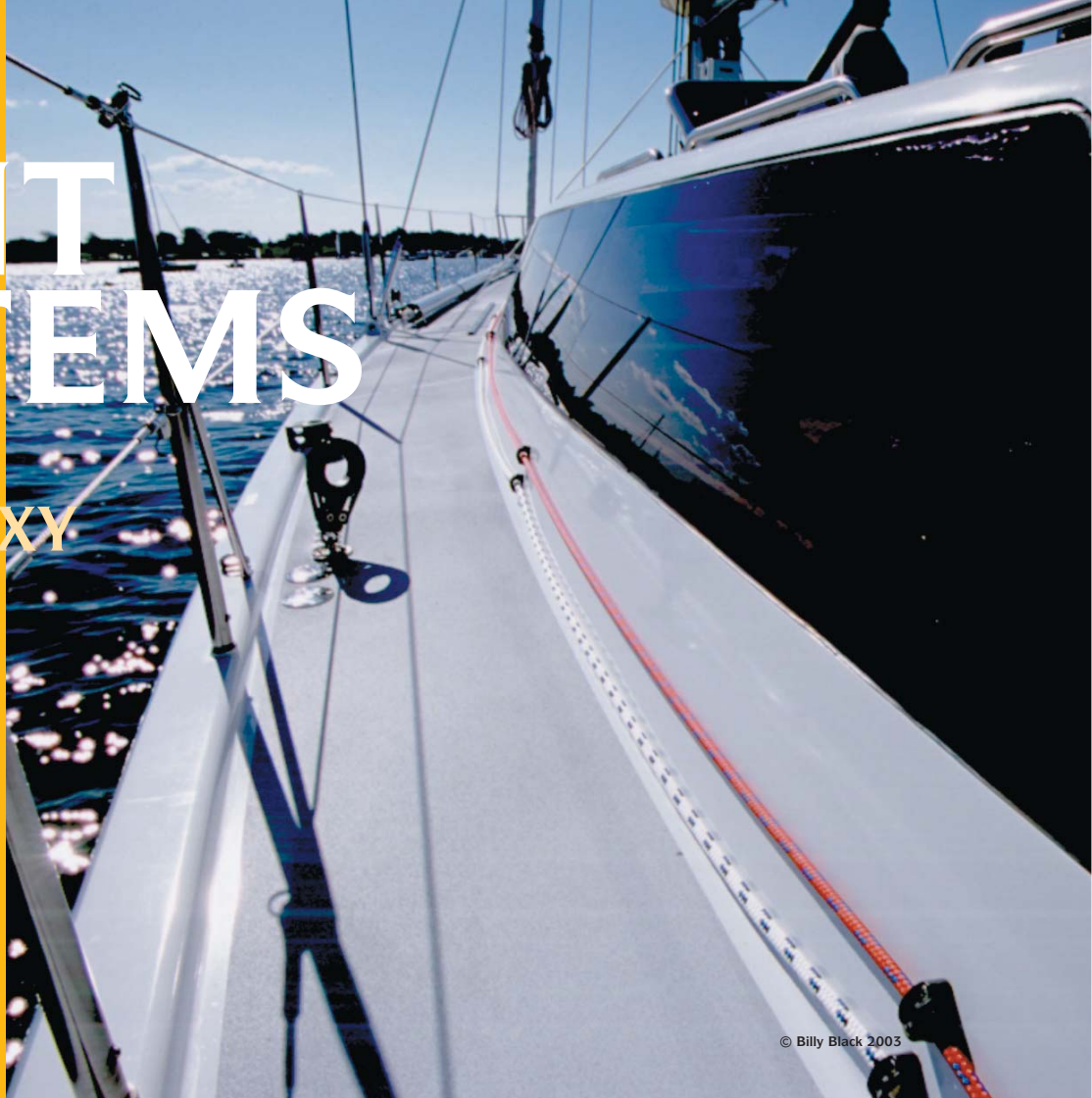
CAUSTIC
This product can cause burns if it comes into contact with the eyes or skin.

FLAMMABLE
This product is flammable in the presence of naked flames or sparks.

DANGEROUS FOR THE ENVIRONMENT
This product can be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

PAINT SYSTEMS

FOR GRP & WOOD EPOXY



PAINT SYSTEMS
FOR GRP & WOOD EPOXY

Different types of GRP
Glass-Reinforced Polyester, also widely known as polyester or fibreglass, is made from GRP resin reinforced with woven or chopped glass fibres. Composite resins are special resins, such as vinyl ester or epoxy reinforced with glass fibres, Kevlar, or carbon.

GRP has many advantages, and a well-maintained GRP boat should have a long service life. After some time, however, even a GRP boat may need maintenance and protection due to the effects of water and sunlight. The main causes are degradation of the gelcoat and osmosis.

Degradation of the gelcoat
The gelcoat is the outermost coloured layer of a GRP hull. Long-term penetration by ultraviolet solar radiation dulls the sheen and can even lead to chalking. Polishes can slow down this process, but the boat will eventually have to be painted if the gelcoat is to be protected and the sheen restored.

Painting over the gelcoat (new work)
The gelcoat must be thoroughly cleaned before you begin painting. Residues of dirt, wax, silicones, and mould release agent (the GRP hull is removed from its mould with this during the manufacturing process) all help to reduce the paint's adhesive power. Good pre-treatment is therefore crucial. The time you invest in this process will be repaid in the results.

For that reason you should follow these instructions carefully:

Pre-treatment of gelcoat or epoxy resin

1. Clean gelcoat with a proprietary cleaner and rinse with tap water.
2. Sand with P150–P180 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. Repair damaged areas with Sikkens Epoxy Repair Filler. Sand smooth, remove dust and degrease.

Painting

Once you have decided which paint system and which tools you are going to use and have chosen the appropriate antifouling, follow one of the work plans shown.

Repainting (maintenance)
Keeping your yacht in good condition increases the amount of pleasure you get from it, helps to retain its value and avoids nasty and expensive surprises. How often you have to carry out maintenance depends on such factors as storage conditions, how well you look after your boat, the amount of UV radiation the boat is exposed to and the degree of use.

Selection chart for antifouling: P40

Painting above the waterline

If the existing topcoat is in good condition:

1. Clean surface with a proprietary cleaner and rinse with tap water.
2. Sand with P280–P320 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. After pre-treating the surface apply 1 or 2 coats of Sikkens Super Gloss following the work plan shown for this.

Repairs

If there are small scuffs and score marks it may be necessary to repair them before you begin painting.

1. Clean surface with a proprietary cleaner and rinse with tap water.
2. Sand with P150-P180 abrasive paper and remove all dust. Clean with proprietary degreaser .
3. Repair damaged areas with Sikkens Epoxy Repair Filler. Sand smooth, remove dust and degrease.
4. Apply Sikkens Polygrond on top of repaired areas.
5. Apply topcoat, following the work plan.

Painting below the waterline

We recommend you apply a new coat of antifouling every year both to counteract fouling and to ensure satisfactory protection of your boat.

Identifying one-pack & two-pack systems: P12 & P13
Anti-slip deck: P42, Selecting antifouling: P40

PAINT SYSTEMS
FOR GRP & WOOD EPOXY

Repairs

It may be necessary to repair damage before you begin painting.

1. Clean surface with a proprietary cleaner and rinse with tap water.
2. Sand with P80 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. Repair damaged areas (above the waterline) with Sikkens Epoxy Repair Filler. Sand smooth, remove dust and degrease.
4. Touch up, following your chosen work plan.
5. Apply antifouling.

ONE-PACK SYSTEM FOR GRP (NOT SUITABLE FOR EPOXY)

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS) 20°/ 10°/ 5°	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
TOPSIDES				
1	Polygrond (only on bare GRP)	6 / 16 / –	10	PU Thinner
2	Super Gloss	24 / 72 / –	15	Do not add thinner
UNDERWATER HULL				
2	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
2	Sikkens Antifouling		10	Do not add thinner

Osmosis occurs when water penetrates to the laminate layer. The water can penetrate either from outside the vessel through the gelcoat or from inside from the bilges. The reaction between the water and soluble parts of the vessel produces a solution that, in turn, attracts more water. The resulting increase in volume damages the laminate layer and the gelcoat. This becomes visible in the form of blisters on your boat. Osmosis may be due to the quality of the materials used and how they have been processed. The type and temperature of the water also play a part.
Osmosis can be observed in some GRP types after just a few years, whereas in others it does not occur until much later. You will need to halt the process as quickly as possible to prevent the skin from becoming damaged any further, and to prevent a situation arising in which even the laminate layer itself might have to be repaired.

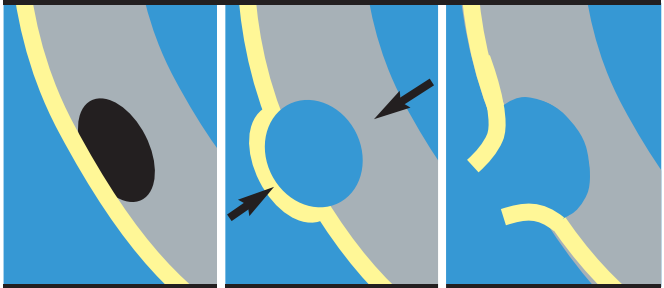
For the overcoating interval of Epoxy MP Coating with Antifouling please refer to the product discription: P46

Identifying osmosis

If you find small blisters on your boat's skin open them up as soon as the boat is taken out of the water as they can temporarily disappear after drying. If the blisters are filled with a brown or grey-green substance that smells like vinegar, you have a case of osmosis.

If there is no moisture behind the blisters and no acidic smell, the problem is not osmosis but air bubbles. This is a less serious problem, which can be remedied by sanding and priming.

HOW OSMOSIS OCCURS



1. Air bubble between laminate and gelcoat
2. Water absorbed through gelcoat and from bilges
3. Build up of pressure bursts blistered gelcoat

- *Watch out for hairline cracks ('crazing') in the gelcoat and fibres poking through it. Water can penetrate in these places and set the osmotic process in motion.*

PAINT SYSTEMS
FOR GRP & WOOD EPOXY

ONE-PACK OSMOSIS PROTECTION SYSTEM

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS) 20˚/ 10˚/ 5˚	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
UNDERWATER HULL				
1	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
5	Bottomcoat CR Extra	6 / 7 / 8	9	CR Thinner
Allow these coats to cure for 7 days (20˚C). Then:				
2	Sikkens Antifouling		10	Do not add thinner

TWO-PACK OSMOSIS PROTECTION SYSTEM

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS) 20˚/ 10˚/ 5˚	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
UNDERWATER HULL				
6	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
2	Sikkens Antifouling		10	Do not add thinner
Allow these coats to cure for 7 days (20˚C) before relaunching.				

Preventing osmosis

If your boat shows no signs of osmosis, an additional protective coating applied over the gelcoat of either a new or a second-hand boat can have a strongly preventive effect. The moisture content in the laminate layer of a second-hand boat must first be reduced to a safe level before this can be done.

Osmosis protection system

Pre-treatment

1. Clean gelcoat with a proprietary cleaner and rinse with tap water.
2. Sand with P150–P180 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. Repair damaged areas with Sikkens Epoxy Repair Filler. Sand smooth, remove dust and degrease.

Applying an osmosis protection system

When you have decided which paint system you are going to use, follow one of the protection system work plans.

For the overcoating interval of Epoxy MP Coating with Antifouling please refer to the product discription: P46

One-pack or two-pack system: P12 & P13
Selecting antifouling: P40

Treatment of osmosis

If your boat shows signs of osmosis it must be treated as quickly as possible. The precise treatment depends on how far the process has advanced and how much damage has already occurred. Accurate measurement of the moisture content in the laminate layer and professional advice are the initial requirements in deciding on a suitable treatment. If you detect osmosis at an early stage (i.e. when there are still only a few blisters) it can be sufficient to remove and fill the blisters and then apply a new protective coating. At a later stage the gelcoat will have to be removed down to the laminate layer. This should preferably be done in the autumn, so that the laminate has the winter in which to dry out. You can then apply a new protective coating in the spring. If the laminate layer itself is severely damaged, repairs will be required before a new protective coating can be applied to the hull.

Osmosis repair

Pre-treatment

As soon as possible after slipping the boat, remove the existing coats of paint and those parts of the gelcoat that have been attacked by osmosis. You can peel, rough-sand, blow-dry, or scrape them off. Then wash down with clean tap water and repeat this 3 or 4 times a week for 3 weeks. Allow to dry thoroughly. If working outdoors, allow 3 or 4 months for drying before applying the paint system you have selected. Before applying the paint system always ask an expert to measure the moisture content. Your Sikkens dealer can arrange this for you.

Next, apply a two-pack repair system using the chart below.

TWO-PACK OSMOSIS REPAIR SYSTEM

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
UNDERWATER HULL				
1	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
Where neccessary fill with:				
	Epoxy Repair Filler	12 / 18 / –		Do not add thinner
Sand off any protruding fibres, fill and sand with P120 abrasive paper. Then:				
5	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
Then:				
1	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
2	Sikkens Antifouling		10	Do not add thinner
Allow these coats to cure for 7 days (20˚C). before relaunching				

Selection chart for antifouling: P40

For the overcoating interval of Epoxy MP Coating with Antifouling please refer to the product discription: P46

SYSTEMS
FOR WOOD

Wood: a beautiful, natural material

Wood combines strength with flexibility, it can be fashioned into beautiful shapes and structures (e.g. boat parts, laths, clinkers), and can be painted or varnished to give, certainly in the latter case, a unique result.

As a natural material, however, wood has its limitations. It swells when it absorbs water and shrinks when it dries out again. The coats of paint or varnish on wooden boats or boat parts therefore need to be extra flexible.

Types of wood

Each type of wood has its advantages and disadvantages. The types of wood most frequently used in yacht building are as follows:

Hardwood

This type of wood comes from slow-growing, broad-leaved, trees and has a strong structure both longitudinally and laterally.

Mahogany is disinfected by seawater and therefore needs less protection. However, it can rot in fresh water.

Teak and iroko are oil-bearing types of wood and are therefore resistant to the effects of water. They have very high wear resistance, which is why they are ideal for decks.

Oak has a long service life, but dark surface blotches can occur when it comes into contact with iron and steel.

Softwood

This is a fast growing wood from coniferous trees, which means it is strong and flexible, especially along its length. Very suitable for use in masts, yards and booms, and rubbing strakes.

ONE-PACK SYSTEM FOR APPLYING A COLOUR FINISH TO WOOD

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
TOPSIDES				
2	Universal Primer	16 / 24 / –	17	AK Thinner, 1st coat 25%
After sanding topcoat with:				
3	Super Gloss	24 / 72 / –	14	AK Thinner
UNDERWATER HULL				
6	Bottomcoat CR Extra	6 / 7 / 8	9	CR Thinner, 1st coat 25%
Allow these coats to cure for 7 days (20˚C). Then:				
2	Sikkens Antifouling for Underwater Paint		10	Do not add thinner

SYSTEMS
FOR WOOD

COMBINATION SYSTEM (2 + 1 COMP.) FOR APPLYING A COLOUR FINISH TO WOOD				
NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
TOPSIDES				
4	Polygrond	6 / 16 / –	14	PU Thinner, 1st coat 25%
Sand well with P280 abrasive paper, then topcoat with:				
2	Super Gloss	24 / 72 / –	14	AK Thinner
UNDERWATER HULL				
5	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
Then:				
1	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
2	Sikkens Antifouling		10	Do not add thinner
Allow these coats to cure for 7 days (20˚C). before relaunching				

- *Before you begin painting or varnishing, make sure that the wood is sufficiently dry.*

Selecting antifouling: P40
Anti-slip deck: P42

Painting over the wood (new work)

Pre-treatment

Good pre-treatment is crucial. The time you invest in this process will be repaid in beautiful, long-lasting results. Follow these instructions carefully.

1. Degrease wood with a proprietary degreaser.
2. Sand with the grain using P150–P180 abrasive paper, remove dust.
3. Degrease again.

Painting or varnishing

Once you have decided on the paint system and equipment you are going to use and have chosen the appropriate antifouling, follow your chosen work plan.

Yacht Varnish (Original Dutch Quality)
Suitable for all types of wood. Very easy to apply. High, full-bodied gloss. Suitable for masts, hulls, cabins and cabin doors.

Clear Varnish UV Extra
Suitable for all types of wood. High gloss varnish with built-in UV filters to protect against yellowing. Scratch-resistant. Suitable for hulls, decks and cabin doors.

For the overcoating interval of Epoxy MP Coating with Antifouling please refer to the product discription: P46

Polygrond + Clear Varnish UV Extra

Suitable for water-resistant bonded plywood and tropical hardwoods. Easy to maintain.

Cetol Marine

Suitable for tropical hardwood as primer and topcoat layer. High performance semi-gloss impregnating oil/varnish.

Cetol Marine Gloss

Gloss Finish for Cetol wood treatment range. Suitable for use on all types of wood above the waterline, including oily timbers such as Teak.

Wood treatments: Pages 47–48

Repairing (maintenance)

Keeping your yacht in good condition increases the amount of pleasure you get from it and helps retain its value and avoid nasty and expensive surprises. How often you have to carry out maintenance depends on factors such as storage conditions,how well you look after your boat, the amount of UV radiation the boat is exposed to and the degree of use.

ONE-PACK SYSTEM FOR APPLYING A NATURAL FINISH TO WOOD

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M^2/LITRE PER COAT	TYPE OF THINNER
TOPSIDES – HIGH GLOSS				
5	Yacht Varnish (ODQ)	24 / 36 / 48	12.5	AK Thinner, 1st coat 25%
or				
5	Clear Varnish UV Extra	6 / 24 / 36	12	AK Thinner, 1st coat 25%
or				
3	Cetol Marine Gloss	16 / 24 / 36	8	N/A
TOPSIDES – SEMI GLOSS				
3	Cetol Marine	16 / 24 / 36	8	N/A

SYSTEMS FOR WOOD

Painting above the waterline:

If the existing topcoat is in good condition:

1. Clean surface with a proprietary cleaner and rinse with tap water.
2. Sand with P280-P320 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. After preparing the surface, apply 1 or 2 coats, following the work plan.

Repairs

You may have to repair minor damage before you begin painting.

1. Degrease wood with proprietary degreaser.
2. Sand with the grain, using P150–P180 abrasive paper, remove all dust and degrease again.
3. If coloured enamels have scuffs and score marks, repair with Sikkens Epoxy Repair Filler and sand smooth.
4. Apply primer and topcoats following work plan.

COMBINATION SYSTEM (2 + 1 COMP) APPLYING A HIGH-GLOSS NATURAL FINISH TO WOOD

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
TOPSIDES				
4	Polygrond	6 / 16 / –	14	PU Thinner, 1st coat 25%
Sand well with P280 abrasive paper, then topcoat with:				
2	Clear Varnish UV Extra	8 / 16 / 24	12	AK Thinner

SYSTEM FOR APPLYING A SILKY NATURAL FINISH TO WOODEN INTERIORS AND FLOORS

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
4	Polygrond	6 / 16 / –	14	PU Thinner, 1st coat 25%
Sand well with P280 abrasive paper, then topcoat with:				
2	Interior Varnish Satin	8 / 12 / 48	13	AK Thinner

- *Never apply a two-pack system over a one-pack system.*

Identifying one-pack and two-pack systems: P12 & P13

Painting below the waterline

We recommend you apply a coat of antifouling every year to counteract marine growth and ensure effective protection of the hull.

Repairs

You may have to repair minor damage before you start painting.

1. Degrease wood with propietary degreaser.
2. Sand with the grain using P80 abrasive paper, remove all dust and degrease again.
3. Repair damaged areas with Sikkens Epoxy Repair Filler. Sand smooth, remove dust and degrease.
4. Touch up using the originally applied paint system.
5. Apply antifouling.

Selection chart for antifouling: P40
Work plans for underwater hull: P27& P28

PAINT SYSTEMS

FOR STEEL & ALUMINIUM

Corrosion-proofing and cosmetic maintenance

Steel and aluminium are used in yacht construction because of their strength, workability and water-tightness. Steel and aluminium boats are always carefully protected with paint both to guard against corrosion and to ensure a beautiful appearance.

ONE-PACK SYSTEM FOR STEEL (NOT SUITABLE FOR ALUMINIUM AND GALVANISED IRON)

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M^2/LITRE PER COAT	TYPE OF THINNER
TOPSIDES				
3	Universal Primer	16 / 24 / –	17	AK Thinner, 1st coat 10%
After sanding enamel with:				
3	Super Gloss	24 / 72 / –	14	AK Thinner
UNDERWATER HULL				
6	Bottomcoat CR Extra	6 / 7 / 8	9	CR Thinner, 1st coat 25%
Allow these coats to cure for 7 days (20˚C). Then:				
2	Sikkens Antifouling		10	Do not add thinner

Painting over bare metal (new work)

The steel plates fitted by the yacht builder are often given a coat of shop primer. This does not usually form a part of the paint system and must be removed from the exterior before applying your paint system. If you have any queries, please contact your supplier.

There are two possible pre-treatment methods. The safest and most effective is to blast-clean the steel to a surface finish to standard Sa 2.5. Another method is to sand the steel completely bare with fibre sanding discs fitted with P24–P36 abrasive paper to a surface finish to standard ST 3. Adequate surface preparation is very important. The time you invest in it will be repaid with beautiful, long-lasting results. Follow the instructions carefully.

- *If your new yacht is made of unblasted steel, have it blasted first, or you will certainly have major problems with rust.*
- *Stripping and removing rust from steel with a wire brush is a slow process and must be done very carefully to obtain good results.*
- *When using a sander, make sure the surface does not become too smooth as this will impair the adhesive qualities of the paint coat. Sand down once with a new rough-sanding disc.*

PAINT SYSTEMS
FOR STEEL & ALUMINIUM

Pre-treatment of steel

1. Sand steel completely bare, using fibre sanding discs fitted with P24–P36 abrasive paper to a surface finish to standard ST 3, or blast-clean with a suitable abrasive to a surface finish to standard Sa 2.5. After sanding only: clean with proprietary degreaser
2. When dry, immediately apply the first coat of the paint system.

Pre-treatment of aluminium and galvanized iron

Special pre-treatment is required when painting aluminium and galvanized iron. If you are in the Netherlands, call Sikkens' technical department for more information on +31 10 503 3545. If outside, contact your local agent.

Painting

Once you have decided which paint system and which painting tool you are going to use and have chosen the appropriate antifouling, follow one of the work plans below.

Repainting (maintenance)

Keeping your yacht in good condition will increase the amount of pleasure you get from it, help retain its value and avoid nasty and expensive surprises. How often you have to carry out maintenance depends on such factors as storage conditions, how well you look after your boat, the amount of UV radiation the boat is exposed to and the degree of use.

Painting above the waterline

If the existing topcoat is in good condition:

1. Clean surface with a proprietary cleaner and rinse with tap water.
2. Sand with P280–P320 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. After pre-treating the surface, apply 1 or 2 topcoats following the work plan shown for this.

- *Never apply a two-pack system over a one-pack system.*

Repair of local damage: P36, Anti-slip deck: P42
One-pack or combination system?: P8
Selection chart for antifouling: P40

One-pack or two-pack system?: P12 & P13

COMBINATION SYSTEM (2 + 1 COMP) FOR STEEL, GALVANISED IRON AND ALUMINIUM

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M^2/LITRE PER COAT	TYPE OF THINNER
ABOVE WATER				
2	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
If necessary, fill/prime with:				
	Epoxy Repair Filler	12 / 18 / –		Do not add thinner
Sand well with P120 abrasive paper then:				
1	Polygrond	6 / 16 / –	14	PU Thinner
Sand well with P280 abrasive paper then topcoat with:				
3	Super Gloss	24 / 72 / –	14	AK Thinner
UNDERWATER HULL				
5	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner
Then:				
2	Sikkens Antifouling		10	Do not add thinner
Allow these coats to cure for 7 days (20˚C) before relaunching.				

For the overcoating interval of Epoxy MP Coating with Antifouling please refer to the product discription: *P46*

PAINT SYSTEMS
FOR STEEL & ALUMINIUM

Repairs to steel and galvanized iron

It may be necessary to repair minor damage before you begin painting.

1. Clean the surface with a proprietary cleaner and rinse with tap water.
2. Sand with P80 abrasive paper and remove all dust.
3. Clean with proprietary degreaser.
4. Touch up using the originally applied paint system.

Repairing aluminium

1. Clean aluminium and degrease with a proprietary cleaner and a stiff nylon brush. Rinse well with tap water.
2. Sand with P36–P80 abrasive paper until the aluminium surface is completely bare. Remove all dust.
3. Clean with proprietary degreaser.
4. After drying, touch up using the originally applied paint system.

Painting below the waterline

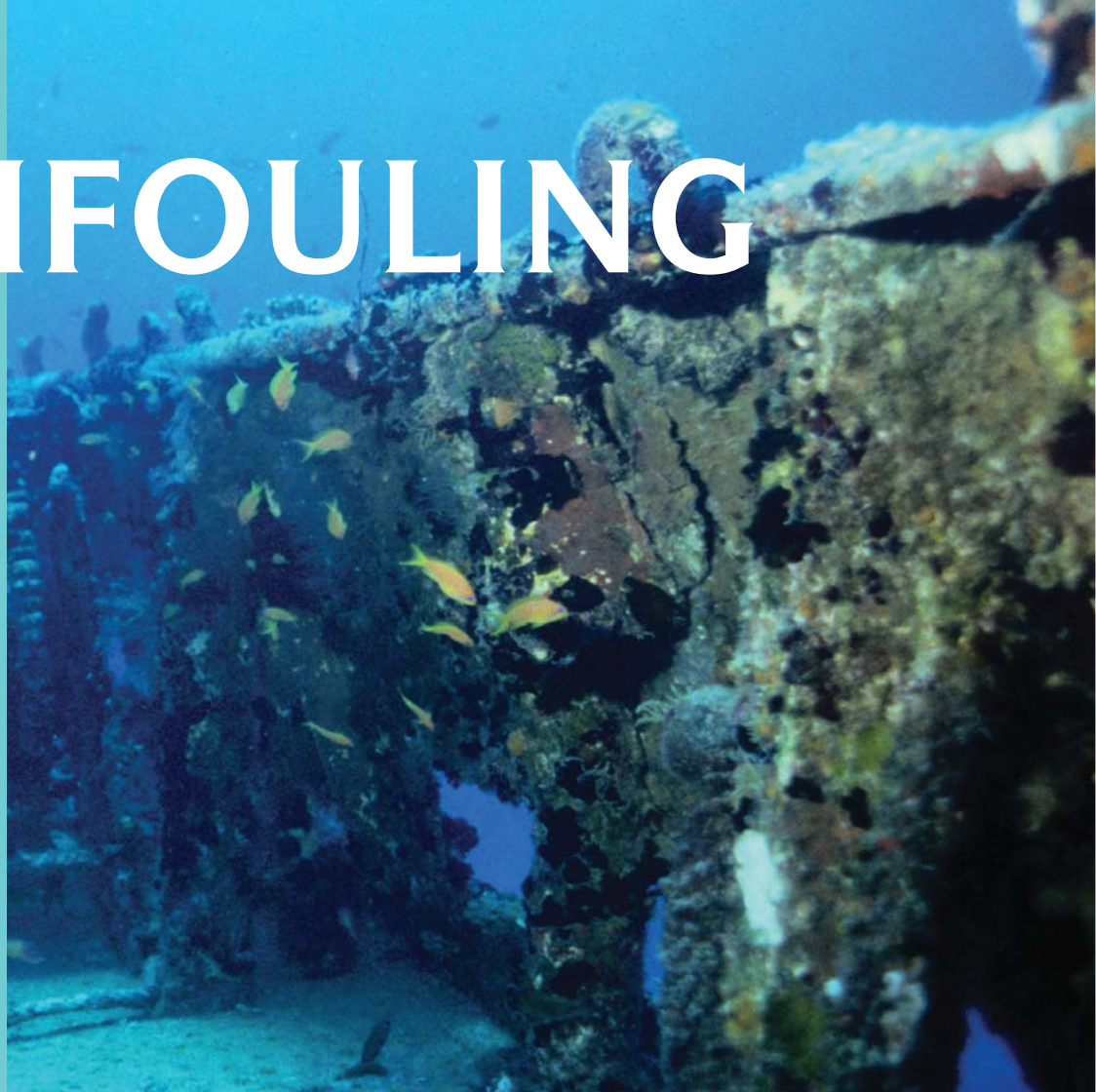
We recommend you apply a coat of antifouling every year to counteract marine growth and ensure satisfactory protection of your boat's hull.

Repairing steel and aluminium

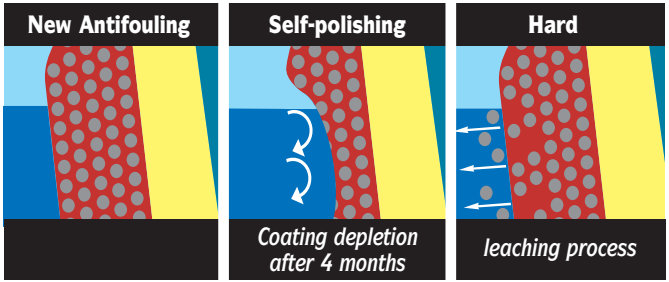
See 'Painting above the waterline.'

Painting above the waterline: P34
Selection chart for antifouling: P40

ANTIFOULING



ANTIFOULING



- *Store the antifouling at room temperature, or bring it up to this temperature before use, to ease application.*
- *Antifouling paints contain heavy pigments that sink to the bottom of the can, so stir well before use.*
- *Apply an extra coat of antifouling to the waterline and bows. This is where the water flows with the greatest force, which means that the coat of antifouling wears off more quickly in these places.*
- *In principle, thinner should never be added to antifouling. If it dries too quickly do not add more than 10% thinner (Sikkens CR thinner).*

Antifouling: a matter of sheer necessity

Antifouling is applied to the underwater hull to deter marine growth as this reduces speed and over time can damage your boat. It is therefore important you choose the right antifouling.

Factors that influence this choice are the type and speed of the vessel, where and in what kind of water you will be sailing, and the type of mooring. Two main types of antifouling are currently available: self-polishing (erodible) and hard antifoulings.

Self-polishing antifoulings and underwater paint

These products gradually polish away/erode as water flows along the hull. Antifouling biocide is continuously released in the process, detering fouling from settling on the hull. Underwater paint contains no biocide; the surface stays clean because the top layer wears off by physical action every time the boat sails. A well applied coat of self-polishing antifouling is only thick enough for one season. Applying a fresh coat does not, however, need very much preparation. Self-polishing antifoulings are ideal for racing yachts, less so for fast motorboats.

Hard antifouling paints

These products also release biocide at a constant rate, but in this case this is due to a leaching process activated by the water. At the end of the season the released biocide has also been used up leaving behind a hard porous coating. This makes hard antifouling ideal for fast motorboats and for boats that stand clear of the water. Hard antifoulings can also be polished using wet sanding, which will increase the speed of the boat even further. If, after several seasons, the coating of hard antifoulings has become too thick, remove it before applying a new layer.

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

Which antifouling for which surface?

The selection chart shows how a fresh coat of antifouling can be painted over an existing one. The letters A, B and C indicate the technique you must use:

▶▶ *Product specifications: Pages 48 & 49*

A. Wash down with tap water, allow to dry, then apply the antifouling.

B. Lightly wet-sand, rinse with tap water, allow to dry, then apply the antifouling.

C. *For a one-pack system*

Remove the old antifouling by wet- sanding. Rinse with tap water, allow to dry and apply new antifouling.

For a two-pack system

Remove the antifouling with a proprietary paint stripper. Clean thoroughly and roughen surface with P180 abrasive paper. Clean once more. Apply a tie coat of Sikkens Epoxy MP Coating and apply new antifouling.

Choose the right antifouling for all sailing conditions.

ANTIFOULING	SALT WATER	BRACKISH WATER	FRESH WATER
Chloorrubber Plus AF	••	•••	•••
Slowpolishing AF 2000	•••	•••	•••
Selfpolishing AF 2000 CF	•	•••	•••

KEY • Limited suitability (contact your local Sikkens agent)
•• Suitable
••• Very Suitable

- *Never dry sand antifouling paints. The dust contains substances that can be harmful if inhaled.*
- *Read the instructions on the packaging for minimum and maximum times between applying antifouling and relaunching the boat.*

ANTIFOULING

ANTIFOULING SELECTION CHART

	NEW ANTIFOULING		
	Chloorrubber Plus Antifouling	**Slowpolishing Antifouling 2000 ***	**Selfpolishing Antifouling 2000 CF**
EXISTING SURFACE			
Sikkens Chloorrubber Plus Antifouling	A	B	B
Sikkens Chloorrubber Antifouling 2000	B	B	B
Sikkens Slowpolishing Antifouling 2000	B	A	A
Sikkens Bottomcoat CR Extra	B	A	A
Unknown hard Antifouling	B	C	B
Unknown erodible Antifouling	B	C	B
Antifouling in bad condition	C	C	C
VC Offshore with Teflon®	C	C	C
Interspeed Ultra	B	A	B
Interspeed Copper Free	B	B	B
Micron Extra	B	A	A
Cruiser Future	B	A	A
Waterways Future	B	B	B
VC 17m	C	C	C
Teflon® Antifouling	C	C	C
Awlstar Goldlabel	B	B	A

KEY: A = Apply direct B = Wet sand C = Remove previous coating (refer to page 39)

*** product contains copper: check legislation on use!**

SYSTEMS

FOR OTHER PARTS OF YOUR YACHT

SYSTEMS
FOR OTHER PARTS OF YOUR YACHT

ONE-PACK SYSTEM FOR DECKS (ONLY SUITABLE FOR STEEL AND WOOD)				
NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
4	Universal Primer	16 / 24 / –	17	AK Thinner, 1st coat 10%
After sanding topcoat with:				
2	Anti-slip Deckpaint	16 / 24 / 26	10	AK Thinner

COMBINATION SYSTEM (2 + 1-COMP) FOR DECKS (NOT SUITABLE FOR WOOD)				
NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
4	Epoxy MP Coating	3 / 7/ 10	8	Do not add thinner
2	Anti-slip Deckpaint	16 / 24 / 26	10	AK Thinner

- *To make Anti-Slip Deckpaints easier to clean, mix with Sikkens Super Gloss at a ratio of 3 to 1.*

DECKS

Decks that are not made of teak or iroko are usually treated with a tough, matt, one-pack paint. This is easy to maintain.

Page 48

New work

Find the right pre-treatment elsewhere in this guide under 'Paint systems for the hull.'

Consult:

For GRP: P20

For steel and aluminium: P34

For wood: P28

Repainting maintenance

1. If the surface is intact, clean and degrease with a proprietary cleaner and wash down with tap water.
2. Sand with P180 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. Apply two coats of Sikkens Anti-Slip Deckpaint.

Select a one-pack or two-pack system: P8

KEELS

Yacht keels are usually made of cast iron, steel, or lead. Pre-treatment methods differ, depending on the material. In some GRP boats the keel is sheathed in the same material as the hull. In such cases the keel can be treated like the rest of the underwater hull.

New work

Pre-treatment of a lead keel

1. Clean the surface with a proprietary cleaner and rinse with tap water.
2. Sand with P40-P60 abrasive paper and remove all dust.
3. Clean with proprietary deagreaser.

Pre-treatment of cast iron or steel keels

1. Either sand the steel completely bare to a surface finish to standard ST 3, using fibre sanding discs fitted with P24-P36 abrasive paper, or blast-clean with a suitable abrasive to a surface finish to standard Sa 2.5. After sanding only: Clean with proprietary deagreaser.
2. When dry, immediately apply the first coat of the paint system.

Repairing and maintenance

We recommend you apply a new coat of antifouling every year both to counteract fouling and to ensure satisfactory protection of your boat.

Repairs:

It may be necessary to repair damage before you apply the antifouling.

1. Clean surface with a proprietary cleaner and rinse with tap water.
2. Wet-sand with P80 abrasive paper and remove all dust. Clean with proprietary degreaser.
3. Touch up with the originally applied paint system.
4. Apply the antifouling you have selected.

Behind the wainscot and in the bilges

Behind the wainscot and in the bilges. Do not overlook these parts of your yacht. Treat them with an easy-to-clean, oil-resistant coat of paint.

Pre-treatment

You will find the appropriate pre-treatment elsewhere in this guide under ‘Paint systems for the hull.’ After pre-treatment, continue with the system you have selected.

Painting – Underwater Hull: P34

Selecting antifouling: P40

SYSTEMS
FOR OTHER PARTS OF YOUR YACHT

- *If the bilges are especially dirty apply a water-soluble cleaning agent before you begin degreasing.*

Engine compartment

This area can become very dirty with oils and greases. You should therefore choose a protection system that is easy to clean.

Pre-treatment

You will find the appropriate pre-treatment elsewhere in this guide under 'Paint systems for the hull.'

Consult:

For GRP: P20

For steel and aluminium: P34

For wood: P28

- *When working in the bilges make sure you have adequate ventilation, preferably an extraction fan system placed at the deepest point.*

Select a one-pack or two-pack system: P8

ONE-PACK SYSTEM FOR BEHIND THE WAINSCOT AND IN THE BILGES (NOT SUITABLE FOR ALUMINIUM AND GRP)

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
2*	Bottomcoat CR Extra	6 / 7 / 8	9	CR Thinner, 1st coat 25%

* Apply two more coats to bilges.

TWO-PACK SYSTEM FOR BEHIND THE WAINSCOT AND IN THE BILGES (NOT SUITABLE FOR SOFTWOOD)

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
2*	Epoxy MP Coating	3 / 7 / 10	8	Do not add thinner

* Apply two more coats to bilges.

ONE-PACK SYSTEM FOR THE ENGINE COMPARTMENT (NOT SUITABLE FOR ALUMINIUM AND GRP)

NO. OF COATS	PRODUCT	MINIMUM OVERCOATING TIME (HRS)	SPREADING RATE M²/LITRE PER COAT	TYPE OF THINNER
3	Universal Primer	16 / 24 / –	17	AK Thinner, 1st coat 10%
After sanding topcoat with:				
1	Super Gloss	24 / 72 / –	14	AK Thinner

PRODUCT
SPECIFICATIONS

PRODUCT SPECIFICATIONS

Priming Materials

High Solid Universal Primer

One-pack. Extremely easy to use, highly rust-preventive universal primer/undercoat based on alkyd resins. Lead and chromate free. Very high performance and good flow.

Use:
As a first coat and undercoat on wood and steel in a one-pack alkyd paint system; only suitable for above the waterline.
Note: Universal Primer needs sanding (p320) before overcoating with enamel.
Colours: White & Grey
Pack sizes: 750ml/2.5 Litre

Bottomcoat CR Extra

One-pack. Strongly preservative and highly rust-preventive bodycoat based on chlorinated rubber.

Use:
On wood, steel, and GRP below the waterline and behind the wainscot. Can be directly recoated with Sikkens antifoulings.
Colours: Grey
Pack sizes: 750ml/2.5 Litre

⚠ *Cannot be recoated with enamels.*
⚠ *For adequate protection, 750ml is sufficient for one layer of 6.75 m^2.*
⚠ *Must be applied by roller.*

Epoxy MP Coating

Two-pack. High quality epoxy primer with optimum preservative and rust-inhibiting characteristics.

Use:
On wood, plywood, steel, aluminium, and GRP, interiors and exteriors, both above and below the waterline. For use on the underwater hull. Colours: White & Grey
Pack sizes:
750ml & 2.5 Litre

⚠ *The first coat of Antifouling however has to be applied "wet in wet" after a minimal drying time of 3 and a maximum drying time of 9 hours.*

Polygrond

Two-pack. High quality colourless polyurethane-based primer. High build and durability. Exceptional impact, scratch and wear resistance.

Use:
Above the waterline, both interior and exterior. Can also be used (after sanding) above the waterline as a tie coat between a two-pack system and a one-pack system.
Pack sizes: 1 Litre/10 Litre

Fillers

Epoxy Repair Filler

Two-pack. Non-shrinking and water-resistant repair filler based on epoxy resin. Solvent-free. High build and mechanical integrity.

Use:

As a repair and gap-filling paste on cured one-pack or two-pack coatings. Also suitable as a filler when mounting deck fittings on wood and steel.
Pack sizes: 600g

Enamels

Super Gloss

One-pack. Superior high-gloss enamel based on siliconized alkyd resin. Excellent gloss retention and very good weather resistance. Optimum flow, non-yellowing. Minimal dirt pick-up.

Use:

On wood, steel, aluminium, and GRP, above the waterline, both inside and out. For new work in combination with the appropriate primers or direct on pre-treated GRP. Also useful for maintaining existing, intact, one-pack enamels.
Available in 18 colours.
Pack sizes: 750ml/2.5 Litre

See our colour collection: inside back cover

Varnishes

Cetol Marine

One-pack, high performance, low maintenance wood treatment. A unique hybrid wood oil/varnish, its translucent satin finish offers excellent UV protection. Durable and impact-resistant, its flexible surface is also microporous, allowing the wood to breathe.

Use:

Suitable for use on all types of wood, especially teak. Particularly suitable for decks, exterior spars, brightwork, and interior woodwork.
Available in
natural, teak and light.
Pack sizes: 750ml

Cetol Marine Gloss

One-pack. Durable, clear gloss protective wood finish developed as a topcoat for the Cetol range of wood treatments whenever a gloss finish is desired. It provides a high gloss, hard wearing and easy to clean finish with UV protection.

Use:

Suitable for use on all types of wood above the waterline, including oily timbers such as Teak. Cetol Gloss is not suitable for use on decks.
Pack sizes: 750ml

PRODUCT SPECIFICATIONS

Varnishes

Yacht Varnish (Original Dutch Quality)

One-pack. Classic, very high gloss, full-bodied varnish based on alkyd resin and wood oil. Optimum flow and long-lasting gloss retention.

Use:

Suitable for all types of wood above the waterline, both inside and out. Also useful for maintaining existing, intact, one-pack varnish systems.
Pack sizes:
250ml/750ml/2.5 Litre

Clear Varnish UV Extra

One-pack. High gloss, wear resistant natural varnish based on alkyd resin reinforced with polyurethane. Long gloss retention and very good weather resistance. Best-in-class UV protection due to a new improved formula.

Use:

Suitable for new work on all types of wood above the waterline, both inside and out, or over well-sanded Polygrond. Also useful for maintaining existing, one-pack varnish systems.
Pack sizes: 750ml

Interior Varnish

One-pack. Satin finish, wear resistant varnish based on an alkyd resin reinforced with polyurethane. Resistant to alcohol and household chemicals.

Use:

In interiors as a silky topcoat for wood. Maintenance of intact wood interiors. Suitable for wooden floor, furniture, wooden finishes, etc.
Pack sizes: 2.5 Litre/750ml

Deckpaint

Anti-Slip Deckpaint

One-pack, Hard-wearing deckpaint based on alkyd resin and colour-fast pigments. Provides a firm grip underfoot as it contains a non-slip additive.
Available in 4 colours.
Pack sizes: 750ml

See our colour collection: inside back cover

Antifoulings

Chloorubber Plus Antifouling

Hard copper based antifouling suitable for use in fresh, salt and brackish water.

Use:
On steel, polyester and wooden yachts in combination with an appropriate under water system.
Available in 3 colours.
Pack Sizes: 750ml/2.5 litre.

Note:
Chloorrubber Plus Antifouling is not suitable for use on aluminium.

Slowpolishing Antifouling 2000

Slow polishing copper based antifouling system. Even at high speeds its semi-eroding nature ensures sufficient paint remains on the hull right to the end of the season. Formulated for use in medium fouling areas, a controlled biocide release provides season-long antifouling protection. Available in bright white and bright colours.

Use:
For use on aluminium hulls as well as GRP, wood and steel.
Available in 4 colours.
Pack sizes: 2.5 Litre & 750ml.

Selfpolishing Antifouling 2000 CF

Copper free polishing antifouling, specially formulated for use in fresh and brackish water. It is also suitable for infrequent use in salt water areas. It's degradable biocide and polishing nature ensures maximum antifouling protection for your hull.

Use:
For use on aluminium hulls as well as GRP, wood and steel.
Available in 4 colours.
Pack sizes:
2.5 Litre & 750ml.

See our colour collection: inside back cover

PRODUCT SPECIFICATIONS

Thinners

AK Thinner
Thinner for one-pack products based on alkyd resin and bitumen.

CR Thinner
Thinner for some one-pack below-water products which are applied by brush, roller, or spray.

Epoxy Brush Thinner
Thinner for two-pack products based on epoxy resin, which are applied by brush or roller.

PU Brush Thinner
Thinner for two-pack products based on polyurethane, as well as for chemically and moisture curing products, which are applied by brush or roller.

WHICH THINNER FOR WHICH PRODUCT?*

AK THINNER	CR THINNER	EPOXY BRUSH THINNER	PU BRUSH THINNER
Clear Varnish UV Extra Yacht Varnish (ODQ) Interior Varnish Universal Primer Super Gloss Anti-Slip Deckpaint	Bottomcoat CR Extra Selfpolishing 3000 Chloorrubber Plus Antifouling Selfpolishing Antifouling 2000 CF	Epoxy MP Coating	Polygrond

* See label for dilution amounts.

MAINTENANCE LOG

Keeping a maintenance log doesn't take you much time but will bring you many benefits.

Keep receipts of the paint you purchased in the log.

- You will know precisely which systems and products were applied to your boat and when.
- From this you will be able to work out what you can and cannot do when you repaint.
- You can keep better track of the service intervals.
- When selling your boat you can let the buyer see how your boat has been maintained.

The use of high quality Sikkens Yachtpaints increases the value of your boat.

LOG
YOUR MAINTENANCE LOG

MAINTENANCE LOG	
Name of owner	
Address	
Name of boat	
Year of construction	
Owned since	
Hull made of	
Mooring	

MAINTENANCE LOG	DATE OF NEW CONSTRUCTION/ MAINTENANCE	SYSTEM	PRODUCT(S)	COLOUR	NUMBER OF COATS	NUMBER OF LITRES	PRICE
Topsides							
Waterline							
Underwater Hull							
Superstructure							
Decks							
Engine Compartment							
Hold/behind the Wainscot							
Keel							
Other							

LOG

YOUR MAINTENANCE LOG

MAINTENANCE LOG	DATE OF NEW CONSTRUCTION/ MAINTENANCE	SYSTEM	PRODUCT(S)	COLOUR	NUMBER OF COATS	NUMBER OF LITRES	PRICE
Topsides							
Waterline							
Underwater Hull							
Superstructure							
Decks							
Engine Compartment							
Hold/behind the Wainscot							
Keel							
Other							

MAINTENANCE LOG	DATE OF NEW CONSTRUCTION/ MAINTENANCE	SYSTEM	PRODUCT(S)	COLOUR	NUMBER OF COATS	NUMBER OF LITRES	PRICE
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Decks							
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LOG
YOUR MAINTENANCE LOG

MAINTENANCE LOG	DATE OF NEW CONSTRUCTION/ MAINTENANCE	SYSTEM	PRODUCT(S)	COLOUR	NUMBER OF COATS	NUMBER OF LITRES	PRICE
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Underwater Hull							
Superstructure							
Decks							
Engine Compartment							
Hold/behind the Wainscot							
Keel							
Other							

PROBLEMS
CAUSES & SOLUTIONS

YOUR PROBLEM NOT HERE? call Sikkens Yachtpaints on: +31 010 - 5033545

PROBLEM	*CAUSE*	*SOLUTION*
Paint peels or flakes	Surface has not been cleaned and degreased properly. Not or unsufficiently sanded. Damp surface. Incompatible products in the system. Service time between haulouts exceeded.	Remove loose paint, clean, and degrease. Sand, clean, and apply a new coat following instructions.
Striping (brush marks)	Poor quality brush. Temperature too high or too low. Paint applied to thinly.	Sand smooth and apply a fresh coat with a suitable full brush at recommended working temperature. Apply the paint at the recommended thickness.
Blistering	Surface not properly cleaned and degreased. Trapping of solvent due to application of too thick a coat or premature recoating. Damp surface or excessive atmospheric humidity.	Sand off blisters, clean and, where necessary, prime. Sand and topcoat once more following instructions.
Fish eyes, craters	Surface is contaminated with silicones or oil.	Degrease and clean. Sand and clean with abrasive paper until the contaminated surface can be degreased again. Allow to dry thoroughly and apply a fresh coat.
Loss of gloss (chalking)	Poorly mixed paint. Wrong cleaners and polishes used. Long exposure to UV radiation. Topcoat too thin. Holes in the surface.	Clean and degrease, sand, and clean with abrasive paper. Apply a fresh coat of thoroughly mixed paint. Keep the finish clean with mild, non-scouring cleaning agents. Wash down thoroughly. Fill holes.

PROBLEMS
CAUSES & SOLUTIONS

PROBLEM	CAUSE	SOLUTION
Orange peel effect	Paint applied with an unstable roller (lambs wool). Too little thinner, too high a wind or too low a temperature. If a spray gun was used: incorrect pressure or spraying distance and/or thinner, too thick a layer, premature recoating.	If a good roller was used: if the paint is still running, clean this with a good brush. In any other case, sand smoothly and apply new coat.
Wrinkling	Paint is too thick or has been applied in direct sunlight or too short a period of overcoating time has been allowed. If two-pack product has been used, it may be insufficiently mixed.	If the paint is not dry, scrape off and clean with thinner. If the paint is dry, sand thoroughly, and clean. Apply a fresh coat.
Cracking	Sudden drop in temperature during application or drying. Service time not observed. System error: hard over soft layer, two-pack over one-pack.	Remove coat of paint completely, clean surface, and apply a fresh coat.
Sags and runs	The paint has been applied in too thick a coat or has been thinned too much.	Sand or scrape off sags and runs and after cleaning apply a fresh coat following instructions.
Paint will not dry	Temperature of hull or surrounding atmosphere too low, insufficient ventilation. Premature recoating. Wrong thinner. Wrong mixing ratio in the case of two-pack paint.	Improve drying conditions (temperature, ventilation). If the paint is not yet dry, remove entire coat. Clean and sand and apply new coat.

sikkens

COLOUR SELECTION CHART

Premium Yacht Paint

sikkens

Enamels

Super Gloss

268 Dolphin Grey

201 Whale Grey

White

249 Island Beige

253 Pearl White

248 Arctic White

243 Bahama Beige

242 Hawaii Beige

213 Beacon Red

233 Lighthouse Red

202 Nile Green

239 Thames Green

297 Pacific Blue

269 Atlantic Blue

210 Ocean Blue

Black

The colours printed here are as close as possible to the actual product but may deviate slightly.

Antifoulings & Underwater Paints

Chloorrubber Plus Antifouling


Red


Blue


Black

Selfpolishing Antifouling 2000 CF

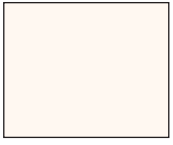

White


Red


Blue


Black

Slowpolishing Antifouling 2000


White


Red


Blue


Black

Deckpaints

Anti-Slip Deckpaint


White

Beige


Grey

sikkens

Akzo Nobel Coatings bv,
Sikkens Yachtpaints,
P.O. Box 986,
3160 AD, Rhoon
The Netherlands

Sikkens Yachtpaints
Service Line:
+31 (0) 10 503 3545

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AKZO NOBEL

2009 Edition