









## Introduction

Since its establishment in 1902, Epifanes has earned a reputation for the highest quality finishes. Dedicated master paint makers, decades of experience and a commitment to using only the best possible ingredients give Epifanes Yacht Coatings their consistent high quality.

Our wide color range and ease of application make Epifanes Yacht Coatings the preferred brand for many boaters. With availability in over 50 countries, we are pleased to see that the number of Epifanes users is steadily growing the world over. From the smallest dinghy to state-of-the-art superyachts, Epifanes offers the best suitable paint or varnish for enhancement and protection in all climates. In this brochure you will find step-to-step instructions how to paint fiberglass/GRP, steel and wooden boats, and how to maintain existing paint and varnish systems. All products are clearly described and categorized in product groups. You will also find ample recommendations and useful tips for getting optimal results.

We are confident this brochure will help you achieve the best long term paint results with Epifanes Yacht Coatings. We realize no brochure can answer all questions or cover all contingencies. In case you have further questions, feel free to contact the importer for your country or visit our website.

## www.epifanes.com

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## The essence of good paint work is good preparation

## Maintenance or new system?

Determine if the existing system will support maintenance coats or must be fully removed and replaced by a completely new system including primers.

#### One- or two-component?

The first thing to determine when painting or repainting existing paint systems is whether to use a one-component or two-component finish. This choice depends primarily on the type of substrate to be coated, the existing paint system in the case of maintenance, and to a lesser extent the working conditions under which the paint has to be applied (temperature / relative air humidity).

## Materials needed?

Calculate the required amount of paint (see box on page 7). Be sure to have enough of the correct thinner. Do not forget necessary tools for the job, i.e. brushes, rollers, masking tape, abrasive paper, etc. and remember your personal safety (protecting gloves/clothes, face mask and/or respirator, safety goggles, etc.)

#### Surface preparation

Thorough surface preparation is time consuming. Make sure your surface is well prepared. Proper degreasing and sanding are critical. Surface preparations often take more time than the actual painting itself. For best results, however, they are essential.

## Follow instructions

Before use, read label and follow the application instructions to the letter. This will prevent disappointments later. If in doubt, contact your dealer.

After application, allow the paint system sufficient time to thoroughly harden. Make notes on used products, quantity and color for future reference.

## Personal safety and environment

When sanding, always wear an appropriate dust mask, gloves and safety goggles.

Make sure the application and drying of paint is performed in well ventilated places and observe all safety precautions. Avoid contact with skin and eyes. When ventilation is limited, wear an appropriate breathing apparatus in order to avoid breathing solvent fumes. Paint leftovers, empty paint cans and tools with hardened paint must be regarded as chemical waste. Dispose of this paint material to hazardous or special waste collection point. Avoid release to the environment.

## Choose a one- or two-component system

The choice between one-component and two-component finishes depends primarily on the type of substrate to be coated, the existing paint system in the case of maintenance, and to a lesser extent the working conditions under which the paint has to be applied (temperature/relative air humidity). A one-component system provides ease of application, is more tolerant regarding the existing paint and can be applied with good results in a wider range of temperatures. A two-component finish is harder and more durable, but is more demanding regarding application skills and working conditions.

	One-component paint system	Two-component paint system
Ease of application	****	***
Ease of maintenance	****	***
Gloss level and gloss retention	****	****
Abrasion and scratch resistance	***	****

## Degrease surfaces with the appropriate degreaser

Surface to be degreased	Degreaser
Existing paint and varnish layers	Epifanes Spraythinner for Paint & Varnish
Bare fiberglass/GRP	Epifanes Fiberglass Prep Cleaner
Bare steel	Epifanes Spraythinner for Paint & Varnish
Bare wood	Epifanes Spraythinner for Paint & Varnish

Prior to sanding, ensure that the surface is clean and well degreased. Remove loose and water soluble dirt with warm water and mild detergent. By degreasing before sanding, grease and contamination will not be sanded deeper into the surface. Degreasing should be done only with multiple clean (lint-free) towels.

#### TIP

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Turn and replace towel regularly. Allow sufficient time to evaporate and the surface to fully dry.



## Use the correct sand paper and grit

Sanding bare surfaces	grit	type
Bare GRP/fiberglass	320-320	dry
Bare steel	60	dry
Bare wood	180-220	dry
Existing paint/varnish layers	220-320	dry

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Sanding painted surfaces	grit	type
One-component primer coats	220-320	dry
Two-component primer coats	180-220	dry
Fresh one-component topcoats	400	wet
Fresh two-component topcoats	320	wet

Thorough sanding is required to ensure optimum mechanical adhesion and to create a smooth finish. Bare surfaces, primers, undercoats and fillers need to be dry sanded in order to avoid the absorption of moisture. Sanding between fresh topcoats and varnishes is best done with a fine grit wet or dry sandpaper. Use the correct sanding paper and grit for each surface. Avoid machine sanding with coarse sandpaper. This produces overly rough sanding scratches and removes too much material, preventing sufficient film buildup. After sanding remove all dust and degrease once more.

#### TIP

Sand bare wood along the wood grain. Always sand fresh varnish layers by hand with a fine grit wet or dry sandpaper.

## Pay attention to working conditions

## Air humidity

The surface to be painted must be dry and clean. When applying finishes under colder conditions in a non-heated working area, be aware of condensation. Humid conditions may cause issues with drying and final results. Moisture that settles onto wet film can cause paint or varnish to "bloom," or lose its gloss. Two-component paints are particularly susceptible to moisture problems. It is always best to work in dry, draft free and dust free surroundings.

#### Temperature

Temperature of the paint or varnish, the surface and working area should be more or less the same. Large temperature differences can cause problems with application, drying and hardening. When working below the minimum application and drying temperatures drying and hardening will take more time and best results cannot always be achieved. Under colder conditions paint and varnish will also be thicker and more difficult to apply. This leads to greater product consumption.

Conditions during	Minimum	Maximum	Max. relative
application and drying	temperature	temperature	air humidity
1-comp. primers	10°C./ 50°F.	25°C./ 77°F	85%
2-comp. epoxy primers / coatings	15°C./ 59°F.	25°C./ 77°F.	70%
1-comp. finishing topcoats	5°C./ 41°F.	30°C./ 86°F.	85%
2-comp. poly-urethane topcoats	12°C./ 54°F.	25°C./ 77°F.	70%

Surface temperature should be at least 3°C./ 37°F. above dew point

## TIP

When painting overhead be aware of condensation from your breath on the cold surface. By using a hygrometer and thermometer one can determine if the working area is fit for painting. Do not paint in direct sunlight, under windy or humid conditions. If working conditions are poor, it may be better to postpone the paint job until working conditions improve. If in doubt, refer to a local weather station.



## Always use good quality paint tools

## Brushes

For best results use clean, high quality natural bristle brushes. Premium EPIFANES brushes are an excellent choice. Good quality brushes hold and deliver more product more consistently than 'chip' or foam brushes. This is important for building consistent film thickness, and thus overall finish integrity. We encourage the application of clear varnishes by brush.

## Rollers

Applying paint by roller is fast and easy, but may produce a so-called "orange peel" effect. This is mainly caused by roller structure, but can be eliminated by following immediately after with light brush strokes over the rolled surface. This is known as "rolling and tipping" and is most easily done with two people working in tandem.

## Masking tape

To ensure a sharp paint edge, use only high quality masking tape. Tightly fix masking tape to the surface. After paint or varnish has been applied, remove masking tape within 2 hours.

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Paint type	The correct roller type
1-comp. primers	Perlon-, Velours, Nylon roller cover
1-comp. finishing paint/varnish	Moltopren foam roller cover
2-comp. poly-urethane finishes	Nylon roller cover
2-comp. epoxy primers/coatings	Nylon roller cover



## Which primer to use?

#### Bare surfaces

Always use an appropriate primer on bare steel and bare wood. On fiberglass above the waterline a primer is only needed if the gelcoat shows hairline cracks and irregularities. The primer will fill the cracks and create the necessary bond with the substrate.

One-component primers can be topcoated with all Epifanes one-component topcoats. Two-component (epoxy-/polyurethane) primers are topcoated with Epifanes Poly-urethane Yacht Coating.

## Applying and thinning paint

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#### Painting techniques

Applying too much wet film thickness may cause throughdrying problems and wrinkling ("alligator skin"). It is especially easy to apply too much wet film thickness on horizontal surfaces, which may result in insufficient through-drying.

Overthinning on vertical surfaces may lead to unwanted sags and "curtains." In general it is better to apply two thin coats than one thick coat.

Apply paint diagonally and divide evenly over the surface. Finish by vertically tipping off. Divide larger surfaces in various smaller sections and minimize making corrections. Avoid overbrushing/ rolling. Epifanes topcoats are renowned for their excellent flow. The paint will flow out to a smooth surface.

#### Thinning paint

Paint and varnish is thinned to allow deeper penetration into the surface and to enhance the flowing ability under difficult working conditions. Do not thin more than necessary. Adding even small percentages of thinner can have a great impact on the paint/varnish. Adding too much thinner will not give a better flow, but may cause curtains and insufficient dry filmthickness. A thin coat provides only limited protection which can lead to a rapid loss of gloss. The thinning ratios mentioned are guidelines and depend on the temperature of the paint and working area. Only use the recommended Epifanes thinners as mentioned on the can. The indicated thinning ratios are general guidelines.

#### Additives

For use of Epifanes Easy-Flow, refer to page 42. Avoid the use of other additives as these may disturb the balance between flow, through-drying, hardness, colorfastness and gloss retention of the product.

## Batch numbers

In order to avoid possible color differences on the same surface, always use topcoats with an identical batch number. The batch number can be found on the bottom of each can. Different batch numbers of the same product can be mixed together to obtain an even color.

## Stirring and mixing

Before painting, ensure the paint is mixed well to a smooth consistency. Ensure all deposits and/or pigments lying beneath the lip or on the sides and bottom of the container are mixed in. Avoid the intake of air into the paint by stirring too aggressively. In case of two-component products, first stir both components separately before mixing them together. Observe the initial reaction time of the mixed product before thinning or applying the paint.

Bare substrate above the waterline	1-comp. Primer	2-comp. primer
Bare fiberglass with irregularities	Epifanes Multi Marine Primer	Epifanes Poly-urethane Primer
Bare steel	Epifanes Multi Marine Primer	Epifanes Epoxy Primer + Epifanes Epoxy HB Coat
Bare wood	Epifanes Multi Marine Primer	Epifanes Epoxy Primer

## Maintain paint systems when needed

All painted surfaces deteriorate in time and require maintenance. How often maintenance is necessary depends on the condition of the existing paint system and the elements to which the paint is exposed. Postponing maintenance will lead to discoloration, loss of gloss, crazing, cracking and eventually complete failure of the protecting paint system. In order to keep a paint system in good condition, apply one or more maintenance coats periodically.

If the existing paint work is still intact and only shows discoloration or loss of gloss, the system requires maintenance. In this case, degrease with Epifanes Spraythinner for Paint & Varnish or denaturated alcohol, sand and apply one or more maintenance coats. Lifting or damaged paint work must be completely removed and replaced by a new paint system including primer coats.

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One-component topcoats, i.e. Epifanes Yacht Enamel and Mono-urethane Yacht Paint can be applied on nearly all existing paint systems regardless of brand. Two-component topcoats, i.e. Epifanes Poly-urethane Yacht Coating, may be applied on existing poly-urethane or epoxy based systems regardless of brand.



## Calculating needed paint quantity

#### Hull above the waterline

2 x (total length + width) x average high between waterline and deck

#### Super structure

Total height + 2x length + 2x width minus window sections

#### Decks

0,75 x total length x width minus super structure

Note: The above calculations are general guidelines. Always calculate 10-15% additional material depending on application method and surface.

## Preparation of fiberglass/GRP above the waterline

## Cleaning

Start by cleaning the fiberglass surface with warm soapy water in order to remove all water-soluble dirt. After drying, degrease with Epifanes Fiberglass Prep Cleaner to remove all wax residues.

## Sanding

After cleaning, sand with 320 dry sandpaper and degrease once more with Epifanes Fiberglass Prep Cleaner.



## Filling

Fill small irregularities above the waterline with Epifanes Fiberglass Filler. Larger repairs can be filled with Epifanes Epoxy Filler. Sand inside cracks and scratches before filling to give the surface some "tooth" for better mechanical bonding. Immediately after the filler has dried, sand with 320 dry, degrease with Epifanes Fiberglass Prep Cleaner and apply a 15% thinned primer or topcoat. This thinned sealer coat will prevent absorption of moisture or topcoats into the filler. After drying of the sealer coat, sand the area(s) with 320 dry.

Epifanes Mono-urethane and Poly-urethane Yacht Paint may be applied directly on well degreased and sanded fiberglass without the use of a primer. However if fiberglass is showing small cracks and irregularities or a filler has been used, it is recommended to first apply a primer coat before topcoating. A primer is required when using Epifanes Yacht Enamel as a topcoat.

#### One-component paint system on fiberglass

	STEP 1	STEP 2
	Epifanes Multi Marine Primer	Epifanes Mono-urethane Yacht Paint
number of coats	1	3
Thinner	5-10 %	0-5%
drying time	18 hours	24 hours
abrasive paper	220 – dry	400 – wet
remarks	Not necessary if gelcoat is intact	Thin first coat by 5-10 %
i	P 35 - Primers	P. 32 – Pigmented Finishes

## Two-component paint system on fiberglass

	STEP 1	STEP 2
	Epifanes Poly-urethane Primer	Epifanes Poly-urethane Yacht Coating
number of coats	1	3
Thinner	5-10 %	0-5%
drying time	6 hours	24 hours
abrasive paper	220 – dry	P400 – wet
remarks	Not necessary if gelcoat is intact.	Thin first coat by 5-10 %. Within 48 hours without sanding. After 48 hours always sand.
i	P. 35 - Primers	P. 32 – Pigmented Finishes

# FIBERGLASS °

## Maintenance of previously painted fiberglass



In order to keep a paint system in good condition, the system needs to be maintained from time to time by applying one or more maintenance coats. If the existing paint work is still intact and only shows discoloration or loss of gloss, degrease the surface with Epifanes Spraythinner for Paint & Varnish or denaturated alcohol, sand with 220 dry and apply one or more maintenance

coats. Lifting or damaged paint must be removed completely and replaced by a new paint system including primer coats.

After degreasing and sanding, Epifanes onecomponent topcoats can be applied on almost all existing paint systems regardless of brand. The onecomponent topcoat is also suited for topcoating two-component Poly-urethane paint systems.

After degreasing and sanding, Epifanes Polyurethane Yacht Coating may be applied on existing poly-urethane or epoxy based systems regardless of brand.

For further information on degreasing and sanding, see page 3 and 4.

## Applying a protecting wax on bare fiberglass



## Seapower Boat Maintenance products

In time gelcoat deteriorates. The surface will lose its gloss, become more porous and hairline cracks may appear. If new fiberglass is treated with a high quality boat wax containing Carnauba, i.e. Epifanes Seapower Cleaner & Wax and Epifanes Seapower Super Poly Boat wax, pores in the gelcoat will be filled resulting in a smooth and fully closed high gloss surface providing excellent protection against weathering and UV radiation.

As gelcoat ages, the use of wax becomes less effective and applying a proper paint system becomes necessary.

For more information on polishing and waxing, check out www.epifanes.eu.



# FIBERGLASS "

## Epifanes

## Seapower Cleaner & Wax

Epifanes Seapower Cleaner & Wax is a "one-step" cleaner and wax based on pure Carnauba wax. Fast and easy to apply, it removes all contamination and protects in one easy application. It provides a protecting wax layer during one season. If a harder wax is desired, cleaned gelcoat may also be treated with Epifanes Seapower Super Poly Boat Wax.

## **Epifanes**

## Seapower Color Restorer

Discolored, weathered and tarnished gelcoat may be polished with Epifanes Seapower Color Restorer bringing back the original color and gloss without damaging the gelcoat.

## **Epifanes**

## Seapower Super Poly Boat Wax

After polishing the gelcoat, apply a new protecting wax layer of Epifanes Seapower Super Poly Boat Wax.



## Painting steel

## Preparation of steel above the waterline

## Cleaning

Make sure the steel surface is dry and remove all dirt, wax and other contamination.

#### Rust removal and sanding

The steel surface must be cleaned of rust and mill scale, preferably by sandblasting to SA 2.5. If sandblasting is not possible, sand the entire surface manually or by machine using 60-80 dry abrasive paper. All welding spots/ drops must be removed and sharp edges must be rounded with a grinder. Areas where rust removal is difficult should be prepared with Epifanes Rust Remover (see page 42).

After cleaning, removing rust and sanding, apply the first (thinned) primer coat as soon as possible to ensure the least amount of renewed oxidation. The temperature of the (bare) steel must at least 3°C (37°F.) above the dew point.

## Filling

Above the waterline fill irregularities with Epifanes Epoxy Filler. After the filler has dried, sand with 220 dry and apply the first thinned primer coat.

#### One component paint system on steel

	STEP 1	STEP 2
	Epifanes Multi Marine Primer	Epifanes Mono-urethane Yacht Paint
number of coats	3	3
Thinner	5-10 %	0-5%
drying time	18 hours	24 hours
abrasive paper	220 – dry	400 – wet
remarks	Attention! Thin first coat by 25% and apply with a stiff brush. If needed, fill between coats with Epifanes Combi Filler (max. 1 mm).	Thin first coat by 5-10%
i	P. 35 - Primers	P. 32 – Pigmented Finishes

## Two-component paint system on steel

	STEP 1 Epifanes Epoxy Primer	STEP 2 Epifanes Epoxy HB Coat	STEP 3 Epifanes Poly-urethane Yacht Coating
number of coats	1	2	3
Thinner	25 %	5-10 %	0-5%
drying time	12 hours	6 hours	24 hours
abrasive paper	180-220 – dry	Not necessary	P400 – wet
remarks	Thin first coat by 25% and apply with a stiff brush. If needed, fill with Epifanes Epoxy Filler	Sand with 180 if subsequent coat is applied after 48 hours	Thin first coat 5-10%. Within 48 hours without sanding. After 48 hours always sand.
(j	P. 35 – Primers	P. 35 – Primers	P. 32 – Pigmented Finishes



In order to keep a paint system in good condition, apply one or more maintenance coats periodically.

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If the existing paint is still intact and only shows discoloration or loss of gloss, degrease with Epifanes Spraythinner for Paint & Varnish or denaturated alcohol. Then sand and apply one or more maintenance coats. Lifting and/or damaged paint must be removed completely and replaced by a new paint system including primer coats.

One-component Epifanes Yacht Paints can be applied on almost all existing paint systems regardless of brand. Epifanes Poly-urethane Yacht Coating can be applied on existing polyurethane or epoxy based systems regardless of brand.

For further information on degreasing and sanding, see page 3 and 4.

## Painting wood

## Surface preparation of wood above the waterline

## Cleaning

Make sure the wood is dry and free of all dirt, wax or other contamination before paint, varnish or stain is applied. Degrease oily, resinous types of wood, like pine and Oregon pine with acetone. Degrease Mahogany and other non-oily woods with Epifanes Spraythinner for Paint & Varnish. Allow to fully evaporate.

#### Wood rot

Cut out all affected sections into dry wood. Precoat all areas needing repair with one coat Epifanes Epoxy Primer, thinned 25%. Once dry, sand and fill with Epifanes Epoxy Filler (max. 2 cm.) or use an epoxy resin. After the



filler or resin has dried (24 hours), degrease and sand with 60-80 dry abrasive paper to a smooth surface.

#### Sanding bare wood

Sand the bare wood to a fresh surface using 100-220 dry abrasive paper. In case of very rough and uneven surfaces, first sand with 60-80 dry. Always sand along the wood grain. Remove all dust and degrease once more.

## Choice of system

Solid wood and overlapping/ lapstrake constructions in wood are flexible by nature. A one-component paint system provides sufficient flexibility to allow for the expansion and contraction of solid wood. Twocomponent paint systems, i.e. epoxy paints and poly-urethane topcoats, should be applied on dimensionally stable woods like plywood and laminates. Because of their hardness and inflexibility, two-component systems are less suited for solid wood and/ or wood constructions and may eventually crack.

## One-component paint system on wood (all wood types)

	STEP 1	STEP 2	
	Epifanes Multi Marine Primer	Epifanes Mono-urethane Yacht paint	
number of coats	1-2	3	
Thinner	5-10 %	0-5%	
drying time	18 hours	24 hours	
abrasive paper	220 – dry	400 – wet	
remarks	Attention! Thin first coat by 25% and apply by stiff brush. If needed, fill between coats with Epifanes Combi Filler. (max. 1 mm)	Thin first coat by 5-10%.	
i	P. 35 – Primers	P. 32 – Pigmented Finishes	

## Two-component paint system on marine plywood

	STEP 1 Epifanes Epoxy Primer	STEP 2 Epifanes Epoxy HB Coat	STEP 3 Epifanes Poly-urethane Yacht Coating
number of coats	1	2	3
Thinner	25%	5-10 %	0-5%
drying time	12 hours	6 hours	24 hours
abrasive paper	Not necessary	Not necessary	400 – wet
remarks	Bonding primer for subsequent coats. If needed, fill with Epifanes Epoxy Filler.	Sand with 180 if subsequent coat is applied after 48 hours	Thin first coat by 5-10%. Within 48 hours without sanding. After 48 hours always sand.
(j	P. 35 – Primers	P. 35 – Primers	P 32 – Pigmented Finishes



## Maintenance of painted wood

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In order to keep a paint system in good condition, apply one or more maintenance coats periodically.

If the existing paint work is still intact and only shows discoloration or loss of gloss, degrease with Epifanes Spraythinner for Paint & Varnish or denaturated alcohol, sand and apply one or more maintenance coats. Lifting or damaged paint work must be completely removed and replaced by a new paint system including primer coats.

One-component topcoats, i.e. Epifanes Yacht Enamel and Monourethane can be applied on almost all existing paint systems regardless of brand. Two-component topcoats, i.e. Epifanes Poly-urethane Yacht Coating, may be applied on existing two-component polyurethane or epoxy based systems regardless of brand

For further information on degreasing and sanding, see page 3 and 4.

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## Clear varnish on wood

## Surface preparation of wood before applying a clear varnish

#### Cleaning

Make sure the wood is free of all dirt, wax or other contamination. Moisture content should be no more than 17% before varnish or stain is applied. Degrease Mahogany and resinous types of wood like Oregon pine with Epifanes Spraythinner for Paint & Varnish. Degrease oily wood types like teak and iroco multiple times with acetone. Allow to fully evaporate.

#### Wood rot

Cut out all affected wood sections. Prepare a new fitted piece of wood. Precoat the repair area with an epoxy resin and securely glue the wood piece in the repair. Allow to cure and sand to a smooth surface.

#### Sanding bare wood

Sand the bare wood to a fresh surface using 100-220 dry abrasive paper. In case of very rough and uneven surfaces, first sand with 60-80 dry. Always sand along the wood grain. Remove all dust and degrease once more.

#### Staining wood

To provide a warm mahogany color on faded wood, apply 1 to 3 thin coats Epifanes Classic Mahogany Stain. Allow a minimum of 2 hours between coats. For best result apply by soft longhaired brush along the wood grain. Avoid spills. After staining, all Epifanes one-component or two-component varnish systems can be applied.

#### Hiding discolorations

On bare wood apply one coat Epifanes Rapidclear. This semigloss, quick drying finish seals the wood so it takes color evenly. After drying (min. 5-6 hours), apply one or more coats Epifanes Rapidcoat until the desired color has been achieved. Rapidcoat is tinted with a light teak tone. Allow min. 5-6 hours between coats, sanding between coats is not necessary.

For a high gloss finish, sand final coat Rapidcoat or Rapidclear with 220 and topcoat with Epifanes Clear Varnish or Epifanes Woodfinish Gloss.

#### Choice of system

Solid wood and overlapping/ lapstrake constructions in wood are flexible by nature. A onecomponent system provides the necessary elasticity to allow for the expansion and contraction of solid wood. Two-component varnish systems should be applied on dimensionally stable plywood and laminates. Because of their hardness and inflexibility two-component systems are less suited for working wood and/ or wood constructions and may eventually crack.

#### Wood under stress (masts, helms)

Wood subjected to frequent working stress, such as spars, flex to an even greater degree. A traditional varnish system with Epifanes Clear Varnish or a combination system with a buildup of Epifanes PP Varnish Extra (2-comp.) and topcoated with Epifanes Clear Varnish (1-comp.) is recommended. These elastic systems are also well suited for varnishing railings, blocks and other wood sections on board.

#### Teak and iroco

Wood type may also be a factor in choosing a varnish. Oily woods such as teak and iroco can be more difficult for varnishes to adhere to properly. On these wood types a breathing onecomponent varnish system with Epifanes Woodfinish Gloss or sealing two-component varnish system with Epifanes PP Varnish Extra is advised.

#### Oak

Oak was often used in traditional boat building. This wood type contains acids that may lead to dark spots when varnished. Therefore the breathing onecomponent varnish system with Epifanes Woodfinish Gloss or sealing two-component varnish system with Epifanes PP varnish Extra is advised.

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	Varnish type	UV filter	High gloss	Hardness	Flexibility	Remarks
Epifanes Clear Varnish	1-comp.	****	****	***	****	A classic extremely high gloss, clear yacht varnish. Contains extra UV filter for maximum UV protection. Suited for all wood types.
Epifanes Woodfinish Gloss	1-comp.	****	****	***	****	A clear, high gloss varnish-like breathing finish. Especially for use on teak, iroco and oak. Contains UV filter. Sanding not necessary (72 hr.) Also available in matte.
Epifanes Woodfinish Matte	1-comp.	****	*	****	***	A rich satin exterior finish for use over buildup of Woodfinish Gloss or Clear Varnish. Contains UV filter. Recoat in 12 hours, sanding not necessary (72hr.)
Epifanes Rapidclear	1-comp.	****	***	****	****	A UV resistant semi-gloss wood finish. Quick drying, limited film building. Extreme bonding to teak and other oily woods.
Epifanes Rapidcoat	1-comp.	****	***	****	****	Teak tinted version of Rapidclear. Camouflages color differences in wood. Quick drying, limited film building. Extreme bonding to teak and other oily woods.
Epifanes Rubbed Effect Varnish	1-comp.	*	*	****	***	A quick drying, clear interior satin finish. Gives superior protection against alcohol and other aggressive household chemicals.
Epifanes Poly-urethane Clear Gloss	2-comp.	****	****	****	**	A high gloss, two-component scratch resistant varnish. Contains UV filters. Maximum outdoor durability. Suitable for plywood and other dimensionally stable wood constructions.
Epifanes Poly-urethane Clear Satin	2-comp.	****	*	****	**	A hard scratch resistant two-component, satin varnish. Superior protection against alcohol and other aggressive household chemicals.
Epifanes PP Varnish Extra	2-comp.	****	****	****	***	A professional, quick drying (2-3 hr.), high gloss buildup varnish. Scratch resistant with perfect bonding to teak. Combines flexibility and hardness in one product. Contains UV filter.

## Traditional one-component varnish system (Mahogany – Meranti – Oregon Pine)

	STEP 1	STEP 2	STEP 3	STEP 4
	Epifanes Clear Varnish	Epifanes Clear Varnish	Epifanes Clear Varnish	Epifanes Clear Varnish
number of coats	1	1	1	at least 4
Thinner	50 %	25%	15 %	0-5%
drying time	24 hours	24 hours	24 hours	24 hours
abrasive paper	220 - dry	220 - dry	320 – dry	400 – wet
remarks	For full varnish penetration inside the wood fibers, apply this first coat heavily thinned.	Second penetrating varnish coat.	Third penetrating varnish coat.	The application of more coats will deepen the luster and prolong the gloss retention of the varnish system.
(j)	P. 29 - Clear Finishes	P. 29 - Clear Finishes	P. 29 - Clear Finishes	P. 29 - Clear Finishes

## Two-component high gloss varnish system (Mahogany – Meranti – Oregon Pine)

	STEP 1	STEP 2	STEP 3	STEP 4
	Epifanes Poly-urethane Clear Gloss	Epifanes Poly-urethane Clear Gloss	Epifanes Poly-urethane Clear Gloss	Epifanes Poly-urethane Clear Gloss
number of coats	1	1	2	at least 2
Thinner	10-15 %	10-15%	5-10 %	0-5%
drying time	24 hours	24 hours	24 hours	24 hours
abrasive paper	220 - dry	220 – dry	320 - dry	400 – wet
remarks	For varnish penetration inside the wood fibers, apply this first coat 25% thinned.	Second penetrating varnish coat. Apply this coat within 48 hours. After 48 hours, always sand.	Remark for all PU coats: Apply each Poly- urethane coat between 24-48 hours without sanding. In case of overcoating after 48 hours, always first sand.	The application of more coats will deepen the luster and prolong the gloss retention of the varnish system. After 48 hours, always sand.
í	P. 31 – Clear Finishes	P. 31 – Clear Finishes	P. 31 – Clear Finishes	P. 31 – Clear Finishes

## High gloss varnish systems

## Combined high gloss varnish system (Mahogany – Meranti – Teak – Iroco)

	STEP 1 Epifanes PP Varnish Extra (2-comp.)	STEP 2 Epifanes PP Varnish Extra (2-comp.)	STEP 3 Epifanes Clear Varnish (1-comp)
number of coats	1	3	3
Thinner	25%	0-5%	0-5 %
drying time	2-3 hours	2-3 hours	24 hours
abrasive paper	do not sand	220 – dry	400 – wet
remarks	For varnish penetration inside the wood fibers, apply this first coat 25% thinned.	These are the filling /building coats. In case of open porous wood, more coats may be necessary. Sand final coat only.	These 3 final coats provide the required extra UV protection. The application of more coats will deepen the luster and prolong the gloss retention and longevity of the varnish system.
í	P. 31 – Clear Finishes	P. 31 – Clear Finishes	P. 29 – Clear Finishes

### Breathing one component high gloss varnish system (Teak- Iroco)

	STEP 1	STEP 2
	Epifanes Woodfinish Gloss	Epifanes Woodfinish Gloss
number of coats	1	5
Thinner	25%	0-5%
drying time	24 hours	24 hours
abrasive paper	280 – dry	400 – wet
remarks	For varnish penetration inside the wood fibers, apply this first coat 25% thinned.	For every coat Woodfinish: Apply subsequent coat within 24-72 without sanding. After 72 hours, always sand.
i	P. 29 – Clear Finishes	P. 29 – Clear Finishes



## **Film thickness**

Varnish systems are multiple coat systems. To obtain best adhesion, apply 1 or more thinned varnish coats to bare wood. These penetrating coats will provide a solid "anchoring" of the total varnish system inside the wood rather than a superficial bonding.

WOOD

Continue and apply multiple unthinned varnish coats. These build up coats will form a smooth mirrorlike finish and provide the necessary protection against UV. It is essential that sufficient varnish film build up is applied. Only with sufficient varnish film thickness, can a varnish system maintain its high gloss and provide long term protection.

Attention: The amount of build up coats stated in the varnish systems in this brochure is based on the average UV exposure in temperate latitudes. In warmer climates with higher UV levels more varnish coats will be needed. Applying more coats will provide a deeper luster and extend the longevity of the varnish system, with longer intervals between maintenance.

For maintenance of varnish systems, see page 22

## Isolating two-component varnish system (Teak – Iroco)

	STEP 1	STEP 2	STEP 3
	PP Varnish Extra	PP Varnish Extra	Poly-urethane Clear Gloss*
number of coats	2	2	3
Thinner	5-15 %	0-5%	0-5 %
drying time	2-3 hours	2-3 hours	24 hours
abrasive paper	220 - dry	220 - dry	400 – wet
remarks	For varnish penetration inside the wood fibers, apply this 1st. coat 10-15% thinned. Allow 2nd coat 24 hours to cure. This coat must be sanded.	Allow 4th coat 24 hours to cure. This coat must be sanded.	These 3 final coats provide the required extra UV protection. The application of more coats will deepen the lustre and prolong the gloss retention and longevity of the varnish system.
i	P. 31 – Clear Finishes	P. 31 – Clear Finishes	P. 31 – Clear Finishes

\*The 3 coats Poly-urethane Clear Gloss may be replaced by 3 coats Epifanes Clear Varnish. This one-component finish provides sufficient flexibility to move along with working wood without cracking. (i.e. on masts or helms)

## Rapid one-component varnish system (semi gloss) (Mahogany – Meranti – Teak – Iroco)

	STEP 1
	Epifanes Rapidclear
number of coats	5-6
Thinner	0-5%
drying time	5 hours
abrasive paper	Not necessary
remarks	Only sand second to last coat with 320 dry. For high gloss finish, sand with 220 and topcoat with Epifanes Clear Varnish or Woodfinish.
i	P. 30 – Clear Finishes



## WOOD $^{21}$

## One-component satin interior varnish system

	STEP 1	STEP 2	STEP 3	STEP 4
	Epifanes Clear (gloss) Varnish	Epifanes Clear (gloss) Varnish	Epifanes Clear (gloss) Varnish	Epifanes Rubbed Effect Varnish
number of coats	1	1	1	1 à 2
Thinner	25%	5-10 %	0-5%	0-5%
drying time	24 hours	24 hours	24 hours	12 hours
abrasive paper	220 - dry	220 – dry	280 – dry	280 – dry
remarks	For varnish penetration inside the wood fibers, apply this first coat 25% thinned.	Second filling / building varnish coat.	Third filling / building varnish coat.	Lightly sand between coats by hand along the wood grain.
i	P. 29 – Clear Finishes	P. 29 – Clear Finishes	P. 29 – Clear Finishes	P. 30 – Clear Finishes

## Two-component satin interior varnish system

	STEP 1	STEP 2
	Epifanes Poly-urethane Clear Gloss*	Epifanes Poly-urethane Clear Satin*
number of coats	3	2
Thinner	0-10 %	0-5%
drying time	24 hours	24 hours
abrasive paper	220 – dry	400 – wet
remarks	These are the filling / building coats. Thin 1st. coat on wood by 10-15%. Sand 3rd. coat with 320 dry.	Lightly sand between coats by hand along the wood grain.
i	P. 31 – Clear Finishes	P. 31 – Clear Finishes

\* Remark for all PU coats: Apply each new Poly-urethane coat between 24-48 hours without sanding. In case of overcoating after 48 hours, always first sand.



## Maintenance of varnish systems

Epifanes varnishes contain highly effective UV filters and inhibitors. A well applied Epifanes varnish system with sufficient film thickness will keep its high gloss and provide long term protection against UV radiation. Periodic maintenance, however, is necessary on any exterior wood surface, even when coated with Epifanes varnish.

Maintenance is necessary when loss of gloss is noticed. The time frame for maintenance depends on the varnish film thickness and the amount of UV to which the varnish system is exposed. Delaying maintenance in this stage will lead to further deterioration, cracking and eventually lifting of the varnish system. In order to keep a varnish system in good condition, we recommend applying 2 or more new varnish coats annually, dependent on climate and exposure.

Apply additional coats where the varnish system is exposed to higher UV radiation (i.e. flat horizontal surfaces and/or tropical conditions). Wood edges and areas susceptible to mechanical damage will require more varnish coats. A varnish system with insufficient film thickness will appear thin and can offer only limited and temporary protection against UV protection.

After degreasing and sanding, Epifanes Clear Varnish and Epifanes Woodfinish Gloss can be applied over almost all existing one- and two-component varnish brands. After surface preparation, Epifanes Poly-urethane Clear Gloss may be applied over practically all existing two-component Poly-urethane varnish systems and epoxy resin.

Ensure the existing system is dry and free of dirt, grease, salt, dust and other contamination. Remove sharp wood edges by sanding so they can hold more varnish. To avoid the intake of moisture and possible warping, apply 3 or more varnish coats on the underside of the wood. Also make sure sufficient film thickness is applied on overhanging areas where it takes longer for moisture to evaporate.

## Judging the condition of varnish systems

#### Varnish system only shows loss of gloss

If the existing varnish system is still intact, well adhered and without cracks, degrease with Epifanes Spraythinner for Paint & Varnish or denaturated alcohol, sand the surface with 320 dry and apply two or more new varnish coats.

#### Varnish system looks poor, shows loss of gloss and light crazing

An existing varnish system that is still well adhered, but shows both loss of gloss and light cracking indicates neglected maintenance. The varnish system can no longer provide sufficient (UV) protection. In this case degrease with Epifanes Spraythinner for Paint & Varnish or denaturated alcohol, sand the surface further down with 220 until all crazing and cracking has been sanded off and apply at least 4 new varnish coats.

#### Varnish system in bad condition

Damaged or lifting adhering varnish systems must be removed by coarse sanding or by hot air gun and sharp (!) scraper. Weathered spots may be treated with a cleaning or bleaching product. If either are used, wash the surface thoroughly with fresh water in order to remove any residue. Allow the surface to dry. If needed or desired, stain bare wood with Epifanes Classic Mahogany Stain (see page 41). Reapply a new varnish system with sufficient film thickness.

#### Varnish system needing repair

After degreasing and sanding, smaller spots needing repair may be filled with several coats of varnish. When an equal level has been achieved, sand to a smooth surface and apply one or more coats of varnish on the entire surface. Larger repair areas must be sanded back to bare wood followed by the application of a new varnish system with sufficient film thickness.

# WOOD

## Maintenance of Teak decks

Generally, deck areas subject to traffic are not varnished because of the potential slipping danger. When exposed to sun light and rain, teak will slowly discolor and eventually turn fully grey. Air pollution, fungi and bacteria may form stains in teak decks.

For the maintenance of teak decks, railings, grips and all other teak on board Epifanes offer various products.





#### Epifanes Teak-O-Clean & Bright

#### Cleans and restores original teak color

Epifanes Teak-O-Clean & Bright is a water based cleaner and brightener for teak and other tropical woods. This cleaner is fast, easy to apply and restores weathered, gray teak to its original color. Unlike many other teak cleaners it will not affect the caulking in teak decks, i.e. polysulfide, polyurethane etc. Shake at least 1 minute before use. Store frost free and away from direct sunlight. Suitable for fresh and saltwater. For prolonged protection from weathering allow to fully dry and treat the surface with Epifanes Teak-O-Bello.

## Epifanes Teak-O-Bello

#### Prevents renewed weathering

Epifanes Teak-O-Bello is a water based coating for teak and other hardwoods. The unique, environmentally friendly formulation prevents the wood from weathering for an extended period of time. Fast and easy to apply. Lasts longer than solvent-based teak oils and teak sealers and resists the formation of mold. It will not affect the caulking in teak decks. i.e. polysulfide, polyurethane etc. Contains no VOC's, no toxic fumes and is solvent free.

#### Treatment of new teak

New teak must be exposed to UV and weather for at least 2 weeks in order to release the natural oils in its outer wood fibers. Existing weathered, gray teak Original color can be restored to gray, weathered teak using Epifanes Teak-O-Clean & Bright. First, moisten the wood with fresh water. Shake the bottle thoroughly before use. Apply liberally with a soft cloth or sponge and allow to soak for 5 minutes while keeping the surface moist. Scrub the surface with a stiff brush or scrubbing pad with the wood grain. Immediately rinse well with fresh water and allow to fully dry.

To prevent further discoloration, follow by treating the surface with Epifanes Teak-O-Bello. Prior to use shake well for at least 1 minute. Apply a very *thin* coat of Teak-O-Bello on the surface with a dust free cloth. After 30 minutes drying time, apply a second *thin* coat. Remove surplus material from caulking seams in teak decks. Maintain a fresh coat at least once annually.

## **Teak Oil Sealer**

Epifanes Teak Oil Sealer may also be used to maintain and protect teak decks, railings, etc. Epifanes Teak Oil is a linseed oil and alkyd resin based

impregnating oil that accentuates natural wood beauty and provides non-slippery protection for teak. Apply wet-on-wet coats with a wide brush or lint-free cloth to clean, dry wood until surface is saturated. Remove excess. Two coats are usually sufficient, unless teak is very dry.









## Other sections on board

## Nonskid

#### Application on decks

For a nonskid finish on decks, the last two high gloss layers of the paint system may be replaced by two coats Epifanes Nonskid Deckcoating. This onecomponent, semi-gloss nonskid deck paint contains a measured amount of nonskid beads to prevent slipping on decks. Suited for use on wood, fiberglass, steel and aluminum. Also for use as maintenance for almost all existing nonskid paint systems. For more information on Epifanes Nonskid Deckcoating, refer to page 33.

## Colors

Epifanes Nonskid Deckcoating is available ready to use in 4 standard colors. Epifanes Nonskid Beads are also available separately in handy 20 gram containers. One of these may be added to one 750ml can of Epifanes Mono-urethane (onecomponent) or one 750 gram can of Epifanes Poly-urethane (twocomponent) if a wider variety of colors is desired.

#### Application of a nonskid coating

Degrease the existing paint system and sand with 220. Apply two coats by *shorthaired roller (velours)*. No sanding necessary between nonskid coats. Stir well before and during use. Allow the final coat at least 72 hours to harden thoroughly.

#### Waffle structured GRP

Degrease by rubbing sponge or Scotch-Brite with Epifanes Fiberglass Prep Cleaner in various directions. This will ensure good adhesion. Continue by applying two coats Epifanes Poly-urethane Yacht Coating (2-comp.). To improve the nonskid effect, add Epifanes Nonskid beads to the last coat of Epifanes Polyurethane. For application, also see the previous section.

# VARIOUS

## The waterline

It is recommended to strike the boot top approximately 5cm. (2 inches) above the waterline, while the boat is fully loaded. This means that the underwater paint system should extend 5 cm. (2 inches) above the actual water level. This will prevent the topside (including the waterline) paint system from being affected by constant immersion in water.

Epifanes Waterline Paint is especially designed for use on the waterline and for application on an existing paint system. On bare fiberglass use Epifanes Multi Marine Primer first for best adhesion. For more information on Epifanes Waterline Paint, refer to page 41.

## **Aluminum parts**

New aluminum has a greasy residue on the surface which must be removed (do not sand). On new aluminum we recommend applying one thin coat Epifanes Washprimer AQ. The Washprimer AQ provides excellent adhesion for the first primer coat on aluminum. For more information on Epifanes Washprimer AQ, refer to page 35.

Although aluminum hardly corrodes, a thin layer of oxidation can be formed which must be removed. The existing aluminum surface must therefore be well degreased and sanded with 80 dry. Apply first coat Epifanes Multi Marine Primer (one-component) or Epifanes Epoxy Primer (twocomponent) as soon as possible.

## Epifanes Mono-urethane Yacht Paint 24 vivid colors.

A hard, one-component, air-drying, high gloss topcoat based on urethane- alkyd resins. Provides superior covering and filling, long lasting weather durability and high gloss retention. Offers rapid initial curing. On the right, a print version of the 24 colors gives an indication of our standard colors. For an overview of all Epifanes colors, see the Epifanes color fan.





#### The paint does not dry thoroughly

The temperature is too low for good flow, there is not enough air circulation or too thick a layer has been applied. Applying too much wet filmthickness may entrap solvents in the paint. Drying problems can also occur by applying a one-component product directly on a 'too fresh' epoxy or fiberglass layer. Fresh epoxy can produce an amine blush on its surface, which interferes with paint's ability to dry properly. Amine blush should be removed with acetone prior to sanding the epoxy. The required amount of time for through-drying depends on the amount of solvents remaining in the original coat. In extreme cases throughdrying may not occur at all. These coats must be removed.

#### The coat has developed wrinkles

"Alligatoring" or wrinkling of paint or varnish is usually caused by the application of too thick a layer (often on horizontal surfaces), or by the application of a fresh coat on an insufficiently cured coat, or by application in direct sunlight. The entrapped solvents may, in time, evaporate through the original layer of paint. If necessary, this can be encouraged by lightly sanding the wrinkled surface, letting air into the paint layer and allowing it to dry. When the paint coat has dried, sand to a fresh surface and recoat.

# QUESTIONS

## Blisters form during application

This is usually caused by application on a hot surface, especially in direct sunlight, or in windy conditions. The heat expands the solvents leading to blisters.

#### Small blisters form after application

This is generally caused by the expansion of moisture or entrapped solvent under the finish. May also result from applying excessive wet film and/or not observing dry times between coats. The use of incorrect thinners may also cause small blisters.

#### "Fish eyes"

The paint refuses to flow in a continuous uniform coating. This is caused by the presence of water, grease, wax, silicones or other contamination on the surface, low temperature, or application of paint on a surface that has not been sanded or sanded insufficiently. Many products may contain silicones, i.e. polishes, hand creams, sealants and cockpit sprays. In all cases remove the paint while still wet. Clean the surface with an appropriate cleaner and degreaser. Sand thoroughly and recoat.

#### Pulling during application

Pulling of paint or varnish can occur when insufficient product is applied or when the product is too thick for the ambient conditions. This can be overcome by either thinning the product or by applying more paint or varnish on the surface. *Read: a thicker coat*.

#### Paint does not adhere

Failure to adhere, lifting or chipping is usually due to insufficient surface preparation (i.e. grease, no sanding, sanding dust on surface). Painting on a damp surface may also cause poor adhesion. Filled areas may also cause bonding problems. Old style filling materials eventually crumble and easily absorb moisture.

#### Water stains

These may develop when rain or other moisture falls on a semi cured coat. After evaporation, chalk and salts from the water remain on the outer film and lead to discoloring.

#### Premature loss of gloss

Premature loss of gloss is often due to insufficient dry filmthickness. The dry paint or varnish film deteriorates much faster than normal. Polishing and cleaning with aggressive polishing products may also lead to loss of gloss and even crazing. In all cases, degrease the surface and lightly sand and apply one or more fresh coats. We recommend applying one or more fresh maintenance coats annually. Especially in warmer climates (i.e. Caribbean) more maintenance coats with shorter times between are needed. Always make sure that paint and varnish work keeps its gloss.







## Clear Finishes

Epifanes Clear Varnish with extra UV filter (1-comp.)

product description	A clear, high gloss, traditional yacht varnish, based on tung oil, phenol and alkyd resin. Unique flow characteristics, high build capacity and excellent outdoor durability. Contains an extra UV filter protecting the wood against discoloration. Its flexibility prevents cracking on working wood. This varnish is famous for its high gloss retention and long lasting properties, even in tropical climates.	A clear, high gloss varnish-like finish, based on alkyd and phenolic resins. Excellent adhesion to degreased and sanded new teak and other exotic woods. For use where a glossy, varnished look is desired. Its microscopic porosity allows the wood to breathe. The UV filter protects the wood against discoloration. Water- and weather resistant and excellent outdoor durability. Sanding between coats is not required if the next coat is applied within 72 hours.	A clear, satin finish, based on urethane/ alkyd resin and tung oil. Provides a beautiful, rich, matte finish for all fine woodworks, like teak and iroco, giving years of protection against alcohol and other aggressive household chemicals.
field of use	For use on bare solid wood (mahogany, meranti, Oregon pine) and marine plywood both inside and outside above the waterline for fresh and salt water environments. Maintenance of intact one- and two-component varnish systems regardless of brand.	To be used on solid teakwood, iroco, oak, mahogany and meranti or as an alternative for continuous maintenance of wood oil systems. For interior and exterior work above the waterline in both fresh and salt water environments. When applied on non-oily wood that does not need to "breathe" a minimum of 8-10 coats is required. Not suited on bankirai.	Apply as a finish coat over several build-up coats of Epifanes Woodfinish gloss or Epifanes Clear Gloss Varnish.
thinner	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish
recoatability	After 24 hours at 18°C/65°F.	After 24 hours at 18°C/65°F. No sanding required if recoated within 72 hours.	After 12 hours at 18°C/65°F.
coverage	1000 ml. is sufficient for 14 m²/150 sq. ft. @ 35 μm dry filmthickness	1000 ml. is sufficient for 12 m²/130 sq. ft. @ 35 μm dry filmthickness	1000 ml. is sufficient for 12 m²/130 sq. f @ 30 μm dry filmthickness
packing	250 ml - 500 ml - 1000 ml - 5000 ml	500 ml - 1000 ml	500 ml - 1000 ml
color	Transparent amber	Shows milky in the can , but dries transparent amber	Transparent amber

Epifanes Woodfinish Gloss

with UV Filter (1-comp.)

Epifanes Woodfinish Matte (1-comp.)

## **Clear Finishes**

Epifanes Rubbed Effect Varnish (1-comp.)

product description	A quick drying, clear interior satin finish, based on urethane/alkyd resin. This interior finish gives superior protection against alcohol and other aggresive household chemicals. Apply as a finish coat over several build- up coats of Epifanes Clear Gloss Varnish or Woodfinish gloss.	A very quick drying, scratch resistant one- component water-based interior varnish providing a beautiful satin sheen, outstanding flowing ability and excellent resistance against alcohol and other household chemicals. Very low on VOC and no odor. For best results apply by nylon brush along the wood grain.	A UV resistant semi-gloss wood finish, based on modified alkyd/ urethane resins. The answer for a quick and easy alternative to conventional varnish. For long term protection and enhancement of all interior and exterior marine and household woods above the waterline. It bonds extremely well to teak and other oily woods, preventing discoloration and emphasizes the natural grain of the wood. Quick drying, excellent breathing properties, flexibility, maximum durability and longevity.
field of use	Apply as a interior satin finishing coat over several build-up coats of Epifanes Clear (Gloss) Varnish or Woodfinish gloss. Maintenance of intact one- and two-component interior varnish systems regardless of brand.	Suitable as a water based alternative to tra- ditional solvent based interior satin varnishes over several build-up coats of Epifanes Clear (Gloss) Varnish or Woodifinish Gloss. Mainte- nance of intact one- and two-component interior varnish systems regardless which brand. Keep away from frost and direct sunlight.	To be used as quickdrying building and/or finishing system on all interior and exterior marine and household woods above the waterline. Rapidcoat (teakpigmented) is also suited as quickdrying primercoat prior to Epifanes Clear Varnish and Woodfinish Gloss (sand with P220). Maintenance of intact one- and two-component varnish systems regardless which brand.
thinner	Brush - Epifanes Brushthinner for Paint & Varnish. Spray - Epifanes Spraythinner for Paint & Varnish	Brush and spray - tap water	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish
recoatability	After 12 hours at 18°C/65°F.	After 6 hours at 18°C/65°F. and after previous coat has dried completely transparent.	After 5 hours at 18°C/65°F.
coverage	1000ml. is sufficient for 13 m²/140 sq. ft. @ 30 μm dry filmthickness	1000 ml. is sufficient for 12 m²/130 sq. ft. @ 30 μm dry filmthickness	750 ml. is sufficient for 10 m²/100 sq. ft. @ 25 μm dry filmthickness
packing	500 ml - 1000 ml	1000 ml	750 ml
color	Transparent amber	Shows milky in the can , but dries fully transparent clear	Rapidclear: transparent amber / Rapidcoat: light teak

Epifanes Rubbed Effect Varnish Low VOC

(1 comp.)

Epifanes Rapidclear and Rapidcoat with UV Filter

(1-comp.)

## Epifanes Poly-urethane Clear Gloss with UV filter (2-comp)

A high gloss, two-component, polyester saturated, aliphatic urethane finish with excellent

outdoor durability. Resistant to weathering, chemicals, scratching and loss of gloss. Outstanding flow characteristics for both brush and spray applications. The UV-filter protects the wood from discoloration.

Mixing ratio by weight: 2 parts component A to 1 part component B . Allow to activate for 10-15 minutes before use.

Suited as a indoor and outdoor varnish system on its own on non-working (ply-)wood, as UV-resistant and protective finishing coat on epoxy resin or as an intermediate adhesion coat on wood treated with epoxy resin prior to the application of Epifanes one-component varnishes.

Brush - Epifanes Poly-urethane Brushthinner Spray - Epifanes Poly-urethane Spraythinner

After 24 hours at 18°C/65°F. Within 48 hours without sanding.

750 gr. is sufficient for 10 m²/100 sq. ft. @ 30 μm dry filmthickness

750 gr. - 3 kg. (A + B)

Transparent clear



Epifanes Poly-urethane Clear Satin (2-comp.)

A hard scratch resistant two-component, polyester saturated, aliphatic urethane

satin finish. Superior protection against alcohol and other aggressive household chemicals. To be used as a satin finish over intact existing (Epifanes) poly-urethane varnish systems on dimensionally stable wood (i.e. marine plywood). Excellent for use on cabin soles or salon tables. Mixing ratio by weight: 2 parts component A to 1 part component B. Allow to activate for 10-15 minutes before use.

Apply preferably as an interior satin finish coat over several build-up coats of Epifanes Poly-urethane Clear Gloss, Epifanes PP varnish Extra or epoxy resin. Maintenance of intact two-component interior varnish systems regardless which brand. Stir well before and during use. For best results, apply by nylon roller or short haired roller.

Roller - Epifanes Poly-urethane Brushthinner Spray - Epifanes Poly-urethane Spraythinner

After 24 hours at 18°C/65°F. Within 48 hours without sanding.

750 gr. is sufficient for 10 m²/100sq. ft./ @ 30  $\mu m$  dry filmthickness

750 gr. (A + B)

Transparent clear



## Epifanes PP Varnish Extra with UV Filter (2-comp.)

A professional, quick drying, high gloss build up varnish for all types of wood, based on alkyd resin and



isocyanate. Recommended sealer for oily wood, i.e. teak and iroco. Resistant to water, alcohol and various household chemicals. Excellent flow and abrasion resistance, superior grain filling and rapid build-up. Offers sufficient flexibility for application on working wood (i.e. masts). The varnish contains a high-quality UV filter, however for exterior use it is advised to overcoat with 2-3 coats Epifanes Poly-urethane Clear Gloss (2-comp.) or Epifanes Clear Gloss Varnish (1-comp.) for extra UV-protection.

Sealing, quick building and/or grain filling varnish for new work on bare solid (working) wood and (non-working) plywood for both interior and exterior above the waterline. Isolating varnish on oily tropical wood types. Ideally suited for working wood. Interior finishing of door, panels, kitchen furniture, etc. Maintenance of existing clear two-component varnishes.

Brush - Epifanes Thinner for PP Varnish Extra or Epifanes PU Brushthinner Spray - Epifanes Thinner for PP Varnish Extra

Wet-on-wet after 2-3 hours at 18°C/65°F. Within 48 hours without sanding. After 48 hours sand with 220.

1000 ml. is sufficient for 14  $m^2/150$  sq. ft. @ 30  $\mu m$  dry filmthickness

2000 ml - 10 ltr ( A + B )

Transparent clear

## Pigmented Finishes

Epifanes Mono-urethane Yacht Paint (1-comp.)

product description	A hard, one-component, air-drying, high gloss finish paint based on urethane/alkyd resins. Provides superior cove- ring and filling, long lasting weather durability and high gloss retention. Offers rapid initial curing.	A high gloss, two-component, polyester saturated, alipha- tic urethane coating. Scratch resistant, excellent outdoor durability and weather resistance. The finish provides a perfect flow and easy application by brush, roller or spray.	A high gloss, one-component, alkyd-based, traditional marine finish. This enamel has very good flowing and covering properties and provides long lasting gloss retention and excellent weather durability.
field of use	Fiberglass/GRP - steel - wood - aluminum: suitable for interior and exterior use above the waterline in conjunction with the appropriate primer or directly on well degreased and sanded fiberglass. Maintenance of existing one- and two-component systems regardless of brand.	Fiberglass/GRP - steel - wood - aluminum: suitable for interior and exterior use above the waterline in conjunction with the appropriate primer or directly on well degreased and sanded fiberglass. Maintenance of existing two- component systems regardless of brand.	Fiberglass/GRP - steel - wood - aluminum: suitable for interior and exterior use above the waterline in combination with the appropriate primer. Maintenance of existing one- and two-component systems regardless of brand.
thinner	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish	Brush - Epifanes Poly-urethane Brushthinner Spray - Epifanes Poly-urethane Spraythinner	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish
recoatability	After 24 hours at 18°C/65°F.	After 24 hours at 18°C /65°F. Within 48 hours without sanding.	After 24 hours at 18°C/65°F.
coverage	1000 ml is sufficient for 15 m²/160 sq. ft. @ 40 μm dry filmthickness	750 gr. is sufficient for 10 m²/100 sq. ft. @ 30 μm dry filmthickness	1000 ml is sufficient for 15 m²/160 sq. ft. @ 40 μm dry filmthickness
mixing ratio	-	By weight: 2 parts comp. A + 1 part comp. B (2 : 1)	-
packing	750 ml	750 gr (A + B)	750 ml - some colors also in 2000 ml.
color	24 standard colors according to color fan.	24 standard colors according to color fan. Custom made colors on request	46 standard colors according to color fan.

Epifanes Poly-urethane Yacht Coating (2-comp.) Epifanes Yacht Enamel

(1-comp.)

0.1.15

## **Epifanes Nautiforte** Yacht Paint (1-comp.)

A high gloss onecomponent finish, based on siliconized alkyd resins. This finish

provides outstanding weather durability, long lasting gloss retention, rapid wet film drying, minimal dirt retention and is nonyellowing.

Fiberglass/GRP - steel - wood - aluminum: suitable for interior and exterior use above the waterline in conjunction with the appropriate primer or directly on well degreased and sanded fiberglass. Maintenance of existing one- and twocomponent systems regardless of brand.

Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish

After 24 hours at 18°C/65°F.

750ml - 2000ml

1000 ml is sufficient for  $14 \text{ m}^2/150 \text{ sq. ft.}$ @ 40 µm dry filmthickness



## **Epifanes Nonskid** Deckcoating (1-comp.)

A one-component, semi-gloss, urethane/alkyd based nonskid deckpaint containing measured amount of polypropylene beads as the nonskid agent. To avoid the intake of moisture, apply Nonskid Deckcoating on at least 2 high gloss coats. Application by shorthaired fur roller provides an even distribution of the beads. Stir well before and during use. Allow the final coat at least 72 hours to harden thoroughly.

Fiberglass/GRP - steel - wood - aluminum: as nonskid finishing deckcoating on full onecomponent paint systems. Maintenance of existing nonskid paint systems regardless which brand.

Short haired roller – Epifanes Brushthinner for Paint & Varnish

After 24 hours at 18°C /65°F. Allow 72 hours to through harden.

1000 ml is sufficient for 4-8 m²/45-85 sq. ft. @ 40 µm dry filmthickness

750 ml - grey # 212 and # 213 also in 2000ml White - light oyster # 24 - off white # 25 White - cream # 1 - grey # 212 - grey # 213



## **Epifanes** Multiforte

A one-component, semi gloss topcoat based on a special combination of medium oil alkyd/ urethane resin reinforced with acrylic copolymer. Provides rapid drying, excellent



adherence, highly abrasive and weather resistant. Recommended for use on steel surfaces above the waterline where a highly abrasive resistant top coat is required, such as decks, deck-houses, gangways and derricks. For new work on bare steel in conjunction with anticorrosive primers such as Epifanes Multi Marine Primer and maintenance of existing, well adhering one-component paint systems.

Fiberglass/GRP - steel - wood - aluminum: For new work above the waterline in conjunction with appropriate primer (i.e. Epifanes Multi Marine Primer). Maintenance of existing, well adhering onecomponent paint systems.

Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish

After 6 hours at 18°C/65°F.

1000 ml is sufficient for 10 m<sup>2</sup>/100 sq. ft. @ 40  $\mu$ m dry filmthickness

#### 4000 ml

White - black - light grey - medium grey - dark grey - redbrown green # 218 - electric blue

## Teak maintenance

	Epifanes Teak-O-Clean & Bright	Epifanes Teak-O-Bello	Epifanes Teak Oil Sealer
product description	Cleans and restores original teak color. Epifanes Teak-O-Clean & Bright is a water based cleaner and brightener for teak and other tropical woods. This cleaner is fast, easy to apply and restores weathered, grey teak to its original color. Unlike many other teak cleaners it will not effect the caulking in teak decks, i.e. polysulfide, polyurethane etc. Shake at least 1 minute before use. Store frost free and away from direct sunlight.	Prevents renewed weathering Epifanes Teak-O-Bello is a water based coating for teak and other hardwoods. The unique, environ- mentally friendly formulation prevents the wood from weathering for an extended period of time. Fast and easy to apply. Lasts longer than solvent-based teak oils and teak sealers and resists the formation of mould. It will not effect the caulking in teak decks. i.e. polysul- fide, polyurethane etc. Contains no VOC's, no toxic fumes and is solvent free. Shake at least 1 minute before use. Apply max. 2 thin coats on fully dry wood. Avoid film building. Store frost free and away from direct sunlight.	A traditional impregnating oil, based on linseed oil and alkyd resin. Protects teakwood from discoloration caused by weather or pollutants. Ideal for the maintenance of teak decks. May be applied wet-on-wet. Degrease wood with Epifanes Spraythinner for Paint & Varnish or denatured alcohol and allow to evaporate. Apply with a wide brush, Poly-Brush or lint free cloth until surface is saturated. Remove excess material. Attention: due to the possible risk of self ignition, after use always keep cloths soaked in water
field of use	Suitable for fresh and saltwater. For prolonged protection from weathering allow to fully dry and treat the surface with Epifanes Teak-O-Bello.	Maintenance of teak decks, teak railings, grips and other teak parts on board, i.e. furniture. For interior and exterior use above the waterline. Suitable for fresh and salt water.	Maintenance and protection of teak decks and other teak on board subject to heavy traffic, i.e. teak railings, grips and other teak parts on board, i.e. furniture. For interior and exterior use above the waterline. Suitable for fresh and salt water. Avoid excessive film building.
thinner	Do not thin	For lighter coloring, dilute with tap water	Do not thin
recoatability	After fully dry	30 minutes at 18°C/65°.	Wet-on-wet
coverage	1000 ml. is sufficient for 7 m²/75 sq. ft. depending on surface.	1000 ml. is sufficient for 7 m <sup>2</sup> /75 sq. ft. depending on surface roughness and application method.	1000 ml. is sufficient for 7 m <sup>2</sup> /75 sq. ft. depending on surface roughness and application method.
packing	500 ml	500 ml	1000 ml

## Primers

product description

field of use

thinner

recoatability

coverage

packing

colours

**Epifanes Multi Marine Primer** "All-in-one-primer"

A one-part multi purpose tie-coat or

sanding and adhesion primer for above

the waterline combining all characte-

ristics of separate substrate primers in

in thin coats only, use above 10°C/50°F.

one. This primer offers excellent adhesion to wood, fiberglass,

and most other bare or painted substrates. Features include

steel, stainless steel, aluminum, galvanized metal, copper

filling and corrosion prevention on steel. If topcoated with

Epifanes Poly-urethane top coat, allow each coat at least

72 hours (18°C./65°F) to dry and sand with 180-220. Apply

exceptional covering capability, high build, good grain



Washprimer AQ

A waterbased adhesion primer providing excellent bond to new aluminum. zinc coated and galvanized steel surfaces, non-ferrous metals, glass and ceramics. For interior and exterior use above and below the waterline. Can be overcoated with all Epifanes one-and two-component products. Apply one thin coat. Avoid curtains. On existing aluminum, use Epifanes Multi Marine Primer after degreasing and sanding the surface with 60.

Epifanes	
Undercoat/	Epigrono

A one-component primer and undercoat based on a urethane/alkyd resin. For use in a one-component paint system above the waterline. Provides maximum adhesion on previously painted, and well degreased and sanded one component paint systems. Suitable for interior and exterior use. Recoatable with all Epifanes one-component products.

Fiberglass/GRP - hard plastics - steel - wood - aluminum - zinc: bonding and transition primer for interior and exterior use above the waterline. Repair and filling primer on existing one- and two-component primers/paints and fully cured, degreased and coarsely sanded epoxy layers. Transition coat between one-component and two-component PU finish and reverse.	New aluminum: bonding primer on difficult adhering surfaces. For interior and exterior use above and below the waterline. Recoatable with all Epifanes one-and two-component paints. Do not sand Epifanes Washprimer AQ.	Fiberglass/GRP - wood - steel - aluminum: for use in a one-component paint system above the waterline in conjunction with the appropriate primer or directly on well degreased and sanded fiberglass. Suitable for interior and exterior use.
Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish	Do not thin Cleaning tools: water	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish
With 1-comp. paints: after 12 hours at 18°C/65°F. With 2-comp. PU paints: after at least 48 hours at 18°C/65°F. (continuous) and preferably longer.	After 2 hours at 18°C/65°F	After 24 hours at 18°C/65°F
1000 ml is sufficient for 8-10 m²/85-100 sq. ft. @ 50 $\mu m$ dry filmthickness	1000 ml is sufficient for 16 m²/170 sq. ft. @ 20 μm dry filmthickness	1000 ml is sufficient for 10 m²/100 sq. ft. @ 40 μm dry filmthickness
750 ml - 2000 ml - 4000 ml	500 ml - 1000 ml	750 ml - 2000 ml
White - grey - redbrown	Off white, dries fully transparent	White

## Primers

Epifanes Poly-urethane Primer

product description	A hard two-part semi gloss poly-urethane undercoat. Provides an extremely smooth, pinhole-free surface prior to topcoating with Epifanes high gloss poly-urethane. Good flowing properties, very quick drying, medium filling and easy sanding.	A two-component primer and/or intercoat based on an epoxy- and vinyl resin with outstanding adhesion proper- ties and durability. Can be recoated with many one- and two-component products. Suitable for use above and below the waterline in an epoxy system or directly on bare fiberglass. Fiberglass/GRP - steel - wood - aluminum: For use above and below the waterline. Bonding	An anti-corrosive primer based on an epoxy resin and zinc phosp- hate as the anti-rust agent. High build, high filling capacity and easy sanding. For use as a filling primer in a two-compo- nent paint system on (ply-)wood and fiberglass and as an anti-corossion primer in a two-component paint system on steel and aluminum. For optimum adhesion always thin first coat on bare plywood and metal by 20-25% and apply by stiff brush.
field of use	Suitable as filling undercoat for interior and exterior on bare fiberglass, on existing poly- urethane based finishes or on epoxy based systems above the waterline for fresh and salt water.	primer for all types of antifouling on fiberglass/ GRP. Finishing bonding coat on epoxy systems. After curing, always degrease with Epifanes Spraythinner for Paint & Varnish to remove possible amine blush from the surface. Do not sand this primer.	Fiberglass/GRP - steel - wood - aluminum: Bonding and filling primer for interior and exterior use above and below the waterline. Also for maintenance of existing epoxy systems. Recoatable with Epifanes Poly-urethane Yacht coating, Poly-urethane Primer, Epoxy HB Coat, Interimcoat and Epoxy Filler.
thinner	Brush - Epifanes Poly-urethane Brushthinner Spray - Epifanes Poly-urethane Spraythinner	Roller and spray - Epifanes Epoxythinner D-601	Brush and spray - Epifanes Epoxythinner D-601
recoatability	After 6 and max. 72 hours at 18°C/65°F. Dustdry after 2.5 hours at 18°C/65°F. Sandable after 24 hours at 18°C/65°F	2-comp. products: after 4 hours at 18°C/65°F. 1-comp. products: after 24 hours at 18°C/65°F.	After 12 hours at 18°C/65°F. Within 5 days without sanding.
coverage	750 gr is sufficient for 9 m²/95 sq. ft. @ 50 μm dry filmthickness	1 kg is sufficient for 8 m²/85 sq. ft. @ 35 μm dry filmthickness	1000ml is sufficient for 12 $m^2/130$ sq. ft. @ 40 $\mu m$ dry filthickness
mixing ratio	By weight: 4 parts base comp. A + 1 part comp. B	By weight: 90 parts Base A : 10 parts Cure B By volume: 86 parts Base A : 14 parts Cure B	By weight: 100 parts Base A : 14 parts Cure B By volume: 100 parts Base A : 25 parts Cure B
packing	750 gr - 3 kg	750 gr - 5 kg.	750 ml - 2000 ml - 4000 ml
colors	White - grey	White	White

Epifanes

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#### Epifanes Epoxy Primer



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#### Epifanes Epoxy HB Coat

Two component high build coating based on modified epoxy resin. High anti-corossive properties on steel and provides protection against osmosis on fiberglass/GRP. The quick drying and high solid contents allow rapid building of epoxy dry filmthickness.

Epifanes Woodprimer

waterline

A traditional one-component primer based on alkyd resins. For use on bare wood, with good filling, building and covering properties. The appropriate primer for wood in one-component paint systems above the waterline. Recoatable with all Epifanes one-component paints.

Wood: bonding primer on bare wood in a

one-component paint system above the

Fiberglass/GRP - steel - plywood - aluminum: fast building of a watertight coating inside and outside, above and below the waterline. For repairing and as anti-osmosis coating on fiberglass. Also for maintenance of existing epoxy systems. Recoatable with Epifanes Poly-urethane Yacht coating, Polyurethane Primer, Epoxy Primer, Interimcoat and Epoxy Filler.

Brush and spray - Epifanes Epoxythinner D-601

After 6 hours at 18°C/65°F. Recoatable with all Epifanes 2-part paints and coatings.

1000 ml is sufficient for 9 m²/95 sq. ft. @ 65  $\mu m$  dry filmthickness

By weight: 88 parts Base A : 10 parts Cure B By volume: 100 parts Base A : 20 parts Cure B

750 ml - 4000 ml

Light grey - black

Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish

After 24 hours at 18°C/65°F.

1000 ml is sufficient for 8-10 m<sup>2</sup>/85-100 sq. ft. @50  $\mu$ m dry filmthickness (depending on wood)

750 ml - 2000 ml - 4000 ml

White - grey - black

Fil	lers
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	Epifanes Epoxy Filler 1500	Epifanes Epoxy Finishing Filler	
product description	A very strong two-component, chemical and water resistant light-weight filler based on epoxy resins. Shrink free, low odor. Can fill up to 1.5 cm. in one single application. Prior to use, stir each component separately and then thoroughly together until color is uniform. Do not use under 12°C. (60°F). Best sandable properties are between 24 and 48 hours.	A strong two-component finishing filler based on epoxy resins. Very fine and shrink free. Provides a very smooth surface. Apply in thin layers only (max. 1 mm.). Prior to use, stir each component separately and then thoroughly together until color is uniform. Do not use under 12°C. (60°F.). Best sandable properties are between 24 and 48 hours.	
field of use	Fiberglass/GRP - steel - wood - aluminum: in two-component epoxy systems above and below the waterline. Smaller repairs may also be topcoated with one-component primers/ topcoats. Larger repair areas should always be topcoated with two-component Poly-urethane. If desired followed by a one-component finish.	Fiberglass/GRP - steel - wood - aluminum: a fine epoxy finishing filler for use on Epifanes Epoxy Filler 1500 in two-component paint systems above and if needed below the waterline. If topcoated above the waterline with a one-component finish, first apply one coat Epifanes Poly-urethane Yacht Coating or Poly-urethane Primer.	
mixing ratio	By volume: 100 : 50 By weight: 100 : 50	By volume: 100 : 50 By weight: 100 : 50	
pot life after mixing	15-40 minutes depending on temperature and filler volume	15-40 minutes depending on temperature and filler volume	
sandable	After 24 hours at 18°C/65°F.	After 24 hours at 18°C/65°F.	
packing	750 ml - 1500 ml 1000 ml is sufficient for 1.1 m²/11 sq. ft. @ 0.5 mm. filmthickness	750 ml 750 ml is sufficient for 1.5 m²/14 sq. ft. @ 0.1 mm. filmthickness	
color	Light grey	Light grey	
remarks	Filled areas must be well degreased with Epifanes Spraythinner for Paint & Varnish or a simular product. This will prevent clogging of grease in the sandpaper and will ensure a better bonding. Follow by sanding with P100-P120.	Filled areas must be well degreased with Epifanes Spraythinner for Paint & Varnish or a simular product. This will prevent clogging of grease in the sandpaper and will ensure a better bonding. Follow by sanding with P100-P120.	

## Epifanes Fiberglass Filler

A fast drying, two-component filler suitable for small repairs on steel and fiberglass. Can be applied in thick layers. Before use, mix well with 2-4 % of the reactor from the tube . Recoatable with all Epifanes one- and twocomponent products.

Fiberglass: repair and filling of small irregularities above the waterline. Steel: Small repairs in paint systems above the waterline.

## Epifanes Combi Filler

A traditional one-component knifing filler based on alkyd resins. Suitable for levelling of small irregularities in one-component paint systems for wood or steel above the waterline. Apply in thin layers only (max. 1 mm.)

Repair and filling of small irregularities in onecomponent paint systems on wood and steel above the waterline.

5-10 minutes depending on temperature and mixed filler volume

After 30-60 minutes at 18°C/65°F.

500 gr + 20 gr. tube white hardener 1500 gr + 50 gr. tube white hardener

#### White

2-4% hardener

After cure, immediately sand and overcoat this filler with a 15-20% thinned sealer coat. The sealer coat prevents moisture from entering the filler.

Apply between primer coats or prior to the first finishing topcoat.

225 gr (tube) - 800 gr

After 24 hours at 18°C/65°F. and 1 mm filmthickness

## Underwater paints

## Westwind Antifouling

	Antifouling	Underwaterprimer	Black
product description	A highly advanced selfpolishing antifouling for all types of ships sailing between 5 and 30 knots. Suitable for both fresh and salt water areas. By the movement of the boat, the underwater area constantly exposes a fresh surface with bio-active materials and avoids unnecessary build-up of antifouling layers. This antifouling can also be applied directly on top of existing polishing antifoulings after thorough scrubbing with a stiff brush and fresh water hosing down and on vinyl and chlorinated rubber antifoulings after wet sanding.	A bituminous primer reinforced with aluminum providing a tough impermeable film. For the underwaterprotection of wood steel or aluminum. For touch ups or full treatment prior to the application of antifouling paints. May be overcoated with most types of antifoulings. We recommend to first make a test patch to check the solvent resistance of the Epifanes Underwaterprimer. Antifouling should be applied in full layers without repeated striking.	A prote for use the wa closed this co whan s on bar synthe of app protec effects
field of use	Fiberglass/GRP - wood - steel: in conjuction with the appropriate primer, suited for fresh and salt water areas. Due to its selfpolishing character, not suited for fast moving (speed-)boats. Launch after at least 18 hours and before 6 months. Not suited for use on aluminum or other light- alloy metals.	Wood - steel: for general underwater protection. Also for maintenance and repair on traditional underwater systems and remaining antifouling leftovers. Recoatable after 7 days with classic and selfpolishing antifoulings. Not suited for antifoulings based on chlorinated rubber and/ or vinyl.	Wood for use optime the wa filmthi 500ml
thinner	Do not thin If needed: Epifanes Thinner D-100	Brush - Epifanes Brushthinner for Paint & Varnish First coat on bare steel and coal tar; Epifanes Spraythinner for Paint & Varnish	Brush - First co Sprayt
recoatability	After 6 hours at 18°C/65°F.	After 24 hours at 18°C/65°F.	After 1
coverage	1000 ml is sufficient for 8 m²/85 sq. ft. @ 50 μm dry filmthickness	1000 ml is sufficient for 9 m²/95 sq. ft. @ 50 μm dry filmthickness	1000 m dry film
packing	2500 ml.	750 ml - 2000 ml - 4000 ml	1000 n
colors	Redbrown - black - light blue - medium blue	Silver/bronze	Black
remarks	Stir well prior to use.	Stir well prior to use.	Stir we

Epifanes

Innonin

## Epifanes Black Bottom

A protecting black coating for use above and below the waterline. Due to its closed surface structure,

his coating provides excellent water resistance whan submerged. Offers perfect bonding on bare steel, existing coal tar layers and ynthetic primers. This coating also offers ease of application, colorfastness, elasticity and protection against UV and the interchangable effects of water and air.

Wood - steel - coal tar: protecting coating
for use above and below the waterline. For
optimum anti corrosion on bare steel below
the waterline at least 250-300 microns dry
filmthickness must be applied. This equals
500ml. per m²

Brush - Epifanes Brushthinner for Paint & Varnish First coat on bare steel and coal tar; Epifanes Spraythinner for Paint & Varnish

After 12 hours at 18°C/65°F.

1000 ml is sufficient for 10 m²/100 sq. ft. @ 50 μm dry filmthickness

1000 ml - 4000 ml

Stir well prior to use.



## Other products

	Epifanes Classic Mahogany Stain	Epifanes Bilge Paint	Epifanes Waterline Paint
product description	Epifanes Classic Mahogany Stain is a quick drying, impregnating stain formu- lated specifically for bare mahogany and other marine woods. This stain provides a warm, rich red/brown mahogany color. Depending on desired degree of intensity, a maximum of 3 coats may be applied on bare wood. Recoatable with all Epifanes one component and two-component varnishes.	A protecting paint based on modified alkyd resin for use in bilge spaces, engine rooms etc. where a tough paint system is required. Can be applied over most substrates with one-component primer systems.	A high gloss one component paint, especially formulated for use at the waterline. Outstanding protection against weather and the interchangeable effects of water and air. Fresh and salt water resistant.
field of use	Wood: for interior and exterior use on new and existing (mahogany) woodwork above the waterline. It is possible to mix Epifanes Mahogany Stain (10% maximum) with Epifanes one- and two-part varnish creating a lightly tinted finish for camouflaging color differences in an existing system. Shake well prior to use.	Fiberglass/GRP - steel - wood - aluminum: Bilges, chain lockers and other wet areas in conjunction with the appropriate primer system.	Fiberglass/GRP - steel - wood - aluminum: on well adhering paint systems above the waterline. It is recommended to strike the boot top 5-10 cm. above the waterline, while boat is fully loaded, preventing constant water immersion.
thinner	Do not thin	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish	Brush - Epifanes Brushthinner for Paint & Varnish Spray - Epifanes Spraythinner for Paint & Varnish
recoatability	After 2 hours at 18°C/65°F.	After 24 hours at 18°C/65°F.	After 24 hours at 18°C/65°F.
coverage	500 ml. is sufficient for 4-7 m²/45-75 sq. ft. depending on surface	1000 ml. is sufficient for 4-7 $m^2/45$ -75 sq. ft. @ 40 $\mu m$ filmthickness	250 ml. is sufficient for 3-4m²/30-40 sq. ft. @ 40 μm filmthickness
packing	500 ml.	750 ml - 2000 ml	250 ml
colours	Mahogany	White - Grey	White - light blue - dark blue - red - black - green

## Other products

	Epifanes Rust Remover	Epitanes Fiberglass Prep Cleaner	Easy-Flow
product description	A quick drying rust remover based on water resisting polymers. Makes steel surfaces suitable for coating and stops the rusting process for 48 hours. Non-toxic and non-flammable. It does not contain any acids and does not harm the environment. Can be topcoated with all Epifanes one- and two-component primers. NOTE: This product is no substitute for any (primer-) coat. It is designed for surface preparation prior to applying an anti corrosion paint system .	A special degreaser for optimum preparation of fiberglass surfaces. Removes all wax and oily residues on fiberglass and ensures a proper surface for sanding and coating. Attention: wear protecting gloves and clothing.	A multi-purpose additive or stand alone coating based on a selection of natural oils. Suitable for use in one- component half-synthetic paints and primers to optimize impregnation/saturation and conservation of the surface. Flow enhancer under cold or hot working conditions. Stand alone product to prevent rust on steel. (penetrates existing thin layers of rust through to the steel) and as impregnating oil on wood.
field of use	Bare steel: rust removal for above and below the waterline. Allow at least 3 hours to react with the steel surface.	Fiberglass/GRP: cleaning and degreaser of fiberglass surfaces above and below the waterline. Always use multiple clean lintfree rags or paper towels. Turn rag/towel constantly during degreasing and often renew rag/towel. This will ensure that contamination is actually removed and not replaced.	Wood - steel: additive for use in one- component half-synthetic paints and primers.
thinner	Do not thin	Do not thin	Do not thin
recoatability	-	-	-
coverage	500 ml. is sufficient for 10m²/100 sq. ft. depending on steel surface	-	-
packing	500 ml	500 ml - 1000 ml	500 ml - 1000 ml - 4000 ml
colours	Off white. Creates a blue-blackish surface after reaction	-	-

	Epifanes Nonskid Beads	Epifanes Paint Remover	Epifanes Accelerator for Paint & Varnish
product description	Nonskid Beads for addition to Epifanes Mono-urethane or Epifanes Poly-urethane Yacht Coating to create a custom made color in nonskid. Stir in gradually, allow 15 minutes and stir once more.	A safe and odorless remover of almost all one-and two-part coatings, varnishes, antifoulings and epoxy based paints. Effectively working and non- evaporating. Suitable for use on vertical and overhanging areas. pH neutral, biologically degradable, does not contain any lyes, acids or biocides and is harmless to the substrate. May be applied below freezing.	A resin based additive for use in traditional one-component, half-synthetic paints and varnishes to speed up the curing process. For interior use, i.e. on chairs, tables, etc. this product can be added up to 50% to Epifanes Clear Gloss Varnish. Do not use with Epifanes Mono-urethane and Epifanes Nautiforte.
field of use	_	Removal of layers on fiberglass, steel, wood and aluminum. Do not apply on soft plastics. Always first make a small test patch to check compatability. After use, remove all remaining material prior to applying any paint layer.	If not more than 5-7% is added, drying time will be reduced without effecting flexibility, gloss and longevity properties.
tips for use	_	Stir well prior to use. Apply one thick layer by medium long natural haired brush. Avoid overbrushing. Depending on the paint layer to be removed allow the paint remover 30 minutes to 4 hours to react. Scrape clean with filling knife or shave hook. Remove remaining paint remover by washing the surface with water.	
coverage	Addition: packed in 20 grams container, sufficient for 750 ml./750 grs.	1000ml. is sufficient for approx. 2-4 m²/ 20-40 sq. ft.	-
packing	20 grs	1000 ml	500 ml - 1000 ml

44	Other products		
	Epifanes Retarder for Paint & Varnish	Epifanes Brushes	Epifanes Poly-Brush Foambrushes
product description	A highly refined oil additive, formulated to extend the wet edge and flowing time of Epifanes one-component paints and varnishes.	Professional, finest natural, black China Boar bristles, densely set without a plug to provide the greatest holding capacity. The ends are split for optimum softness. Old world quality for those who demand the best working tools. If well cleaned and stored, Epifanes brushes may last for years. Available in various sizes in round, oval and full style.	These foam brushes are made of the highest quality poly-urethane foam. The high foam density and sharply cut brush edge provide optimal paint distribution and long working span. Unlike many other foam brushes Poly-Bush foambrushes have a plastic inner frame providing improved shape retention.
field of use	_	_	Tipping off of previously applied one- and two-component primers, paints and coating based on alkyd, (poly-) urethane and epoxyresin. Very suited for applying Epifanes Classic Mahogany Stain and Epifanes Teak Oil Sealer.
tips for use	Do not use with Epifanes Mono-urethane and Epifanes Nautiforte	Pull new brushes first on sandpaper to remove possible loose hairs. After use, clean well and store brushes in raw linseed oil. For renewed use, clean brush by slapping and allow to dry.	For best results, hold Poly-Brush between thumb and index finger and lightly tip off the wet film to a smooth surface. ATTENTION: Poly-brushes are not intended to replace brush and/or roller, but solely for tipping off previously applied wet film.
packing	500 ml - 1000 ml		

## **Epifanes Thinner**



## Seapower Boat maintenance products

**Epifanes Seapower** Cleaner & Wax

Product description	A one step cleaner containing the finest Carnauba wax. Easy to apply and provides maximum protection for several months. It removes surface oxidation, dirt and water marks. Cleans and protects the surface in one single application, leaving a high gloss finish. Contains "UV blockers". May be applied in full sunshine and on wet surfaces.	
application tips	Firm rubbing increases the polishing effect. Apply Cleaner and Wax on the cloth instead of the surface. Rub in a brisk, overlapping circular motion. Allow the product to fully dry before buffing. Refresh cloth frequently to ensure a brilliant luster.	
packing	500 ml - 1000 ml - 5000 ml	



## **Epifanes Seapower** Wash-n-Wax Boat Soap

#### For regular wash

A highly concentrated soap for regular washing of boats, cars or mobile homes. Unlike most other soap brands, this product cleans without removing the existing protecting wax layer. Provides a clean, water resistant and streak-free film. It even adds strength to the existing wax layer.

Wash-n-Wax Boat Soap is bio-degradable, pH-neutral and can be used on fiberglass, metal, rubber, wood and other types of (painted) surfaces. Very economical to use.

To prevent excess foam, fill the bucket with

To ensure a clean solution, squeeze dirty liquid

from the sponge before dipping in the bucket.

Work on small areas keeping the surface wet.

To save time and water, dry the surface with a

Can be used in combination with salt water.

warm water prior to adding Boat Soap. For heavy duty cleaning add more boat soap.

chamois directly after washing,

Also suitable for cleaning teak decks.

## **Epifanes Seapower** Super Poly Boat Wax

#### Hard "once-a-year" Carnaubawax

The ultimate "Sun block" for the boat made from 100% pure Carnauba wax. Fills pores and

provides maximum protection to all polyester, painted and varnished surfaces and metal for a complete season.

This "once a year" wax is easy to apply leaving a hard high gloss surface resistant to water and weather. Advanced "UV blockers" provide additional protection. May be applied in full sunshine and on wet surfaces.

## Apply thin coats.

A thick coat is more difficult to buff out and does not improve protection or gloss. Can be applied on both wet and dry surfaces. Apply the wax on the cloth not on the surface. Allow the wax to fully dry before buffing. Rub in a brisk, overlapping circular motion. Refresh cloth frequently to ensure a brilliant luster.

Can be applied on varnished wood to create an extra UV filter for added protection.

#### 500 ml - 5000 ml

## Epifanes Seapower Color Restorer

## Restores color and removes oxidation

If a gelcoat surface is weathered and discolored

it needs to be polished. Seapower Color Restorer restores the original color and gloss to gelcoat surfaces without damaging the gelcoat itself. Removes severe oxidation, dirt deposits and dullness, producing a fresh looking surface.

This product is appropriate for all colors. Even dark colored gelcoats and paints are restored to "like new" condition. After polishing use Epifanes Seapower Super Poly Boat Wax to give the gelcoat a new protecting waxlayer.

Rubbing firmly increases the polishing effect. Rub in a brisk, overlapping circular motion.

Allow the product to fully dry before buffing. Refresh cloth frequently to ensure a brilliant luster. Epifanes Seapower Inflatable Boat Cleaner

> Cleans, softens and preserves rubber boats and fenders

This formula has been

specially developed for cleaning and maintaining all butyl, hypalon, rubber and vinyl boats and surfaces. It slows down the aging process and removes deep-seated dirt and marks from tar, diesel oil and soles of shoes. Prevents rubber and vinyl surfaces from becoming sticky in the sun.

Also excellent for cleaning fenders. It softens and smoothens the fender reducing scratching and squeezing caused by rubbing against the hull. For tough stains use a Scotch Brite pad.

## Seapower Hull Cleaner

For a clean underwater area

At the end of the sailing season topsides and

waterline are often covered with algae, seaweed, oil residue and other contamination. If not removed quickly, this can cause permanent staining and even damage to the hull. Seapower Hull Cleaner effectively addresses all degrees of persistent contamination.

The special formulation ensures quick and effective cleaning without attacking antifouling or waterline paint. Spray on, allow to react and rinse, it's that simple.

Also suited for removing spider and bird droppings. Rinse with ample fresh water and

give a new protecting wax layer using Seapower Epifanes Super Poly Boat Wax.

## Seapower Metal Polish

#### For shiny metal

#### All metals on

board are subject to corrosion and oxidation. Seapower Metal Polish easily removes all oxidation leaving a clean surface. Suitable for use on aluminum, magnesium, copper, bronze, chromium, stainless steel and similar surfaces. Also for repairing small cracks and restoring the original clear appearance of yellowed Plexiglas and Lexan. Formulated in easy to use paste form.

Metal Polis

After cleaning use Epifanes Seapower Super Poly Boat Wax to give a protecting high gloss waxlayer.

ATTENTION: do not use on anodized parts.

500 ml

227 gr





## **General conditions**

Neither seller nor manufacturer shall be liable for injury, loss or damage direct or coincidental arising from the use of these products. Before using, user shall determine the suitability of these products of their intended use, and user assumes all risk and liability whatsoever in connection with these products beyond the original purchase price. Due to varying conditions and applications, the manufacturer and seller shall not be held responsible for the failure of these products. The information and suggestions in our technical literature is, to the best of our knowledge, reliable. Since conditions of use are beyond our control, this company cannot assume responsibility for any risk or liabilities which may arise from the use of its products.