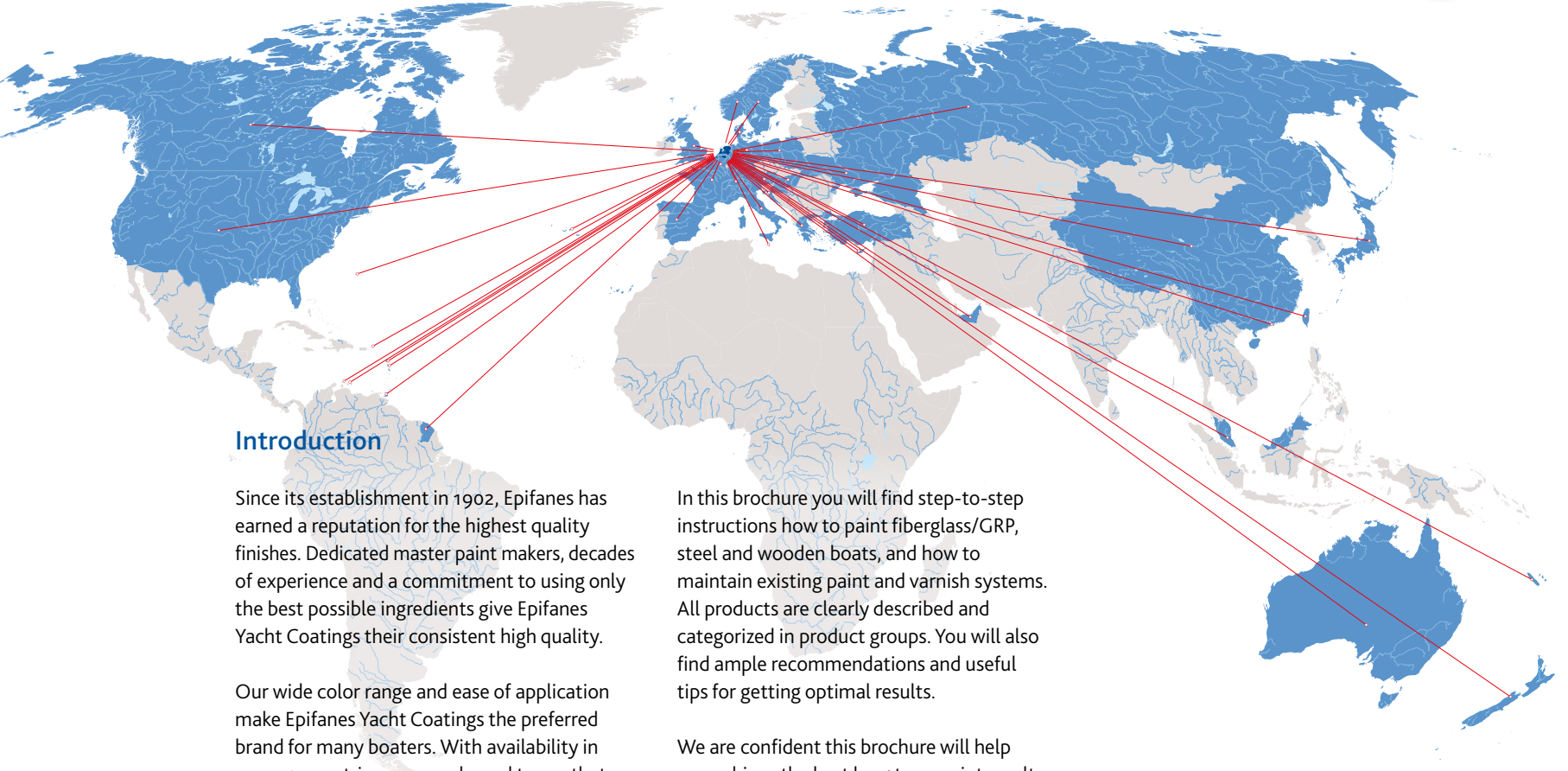
EPIFANES® Yacht Coatings

Paint systems and products

Advice and paint systems

Product descriptions



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

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
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

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 build-up. 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 application and drying	Minimum temperature	Maximum temperature	Max. relative 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.

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-/poly-urethane) primers are topcoated with Epifanes Poly-urethane Yacht Coating.

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

Applying and thinning paint

Painting techniques

Applying too much wet film thickness may cause through-drying 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.

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.

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 top-coats 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 Epifanes Multi Marine Primer	STEP 2 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 %
ⓘ	P 35 - Primers	P. 32 – Pigmented Finishes

Two-component paint system on fiberglass

	STEP 1 Epifanes Poly-urethane Primer	STEP 2 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.
ⓘ	P. 35 - Primers	P. 32 – Pigmented Finishes

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 one-component topcoats can be applied on almost all existing paint systems regardless of brand. The one-component topcoat is also suited for topcoating two-component Poly-urethane paint systems.

After degreasing and sanding, Epifanes Poly-urethane 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.

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.

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.