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CHAPTER ONE



VARNISH & CLEAR FINISHES

20 Pages

Faster build-up, longest lasting!

Type	Traditional marine varnish, based on tung oil, phenolic-modified alkyd resins and maximum U.V. absorbers.	
Color	Clear Amber	
Gloss	Ultra high gloss	
Recommended use	For long lasting protection of all marine or household woods. Interior and exterior wood above the waterline. Maintenance of existing, intact, one and two-component varnish systems. Anywhere a deep high gloss finish is desired.	
Film characteristics	Superior flow, gloss and durability. Excellent flexibility and water resistance in all climatic conditions. High build capability. Renowned for its high gloss retention and weather durability. This varnish lasts! Even in tropical climates!	
Container Size	250 ml., 500 ml., 1000 ml., 5000 ml.,	
Density	0.92 kg./liter	
Solids Content	55 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 50 micron Per coat dry - 30 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 3 hours Dry - 12 hours	Tape free - 24 hours Recoatable - 24 hours
Spray Application	Conventional air: Thin as needed up to 20% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 18 - 22 seconds Din Cup 4, 14 - 18 seconds Ford Cup 4. Nozzle 1.5 mm. - 1.8 mm. Pressure 2 - 3 Bar.	
Additives	Epifanes Accelerator, Epifanes Retarder	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid varnishing in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Epifanes Clear Gloss Varnish is compatible with most other types of one-component alkyd or urethane based varnishes and over two-component varnishes. Any existing finish must be intact, degreased and sanded prior to recoating.	

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One-component clear varnish system on wood above the waterline

Surface Preparation:

Bare wood must be clean, dry and free of grease etc. Degrease with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol. Wiping down with mineral or white spirits, may leave an oily residue. Do not use water. Sand the bare wood to a fresh surface with 60 - 80 grit dry abrasive paper with the grain of the wood. A block may be used to assist in fairing the surface. Finish sand with 100 - 120 grit dry abrasive paper. If desired, stain the wood at this time with a good quality oil or water based stain. Do not color the varnish itself as this will create a muddy appearance. Brush application with a good quality, clean, natural bristle brush will give good results. Try an Epifanes brush for the ultimate varnishing experience. Foam brushes are convenient on smaller projects however, are not suitable for larger jobs. "Roll and tip" is a great method for large flat areas. 3" foam roller followed by a bristle brush is the best combination.

Coats	Product	Thinner	Thinning Ratio %	Drying Time in hours	Abrasive paper grit	Abrasive paper type	Approx. coverage /	Remarks
First	Epifanes Clear Gloss	Brush Thinner For P&V	50	24 at 65F.	220	Dry	150 - 300 sq. feet	Do not sand through the stain Sand by hand. Machines can be too aggressive.
Second	Epifanes Clear Gloss	Brush Thinner For P&V	25	24 at 65F.	280	Dry	150 - 250 sq. feet	
Third	Epifanes Clear Gloss	Brush Thinner For P&V	15	24 at 65F.	320	Dry	150 - 200 sq. feet	
At least 4 more	Epifanes Clear Gloss	Brush Thinner For P&V	0 - 5	24 at 65F.	320-400	Wet or Dry	150 sq. feet	

Maintenance:

If existing coats of varnish are intact, one or more coats may be applied on a well cleaned, degreased and lightly sanded surface. For annual maintenance, apply a minimum of one or two coats of Epifanes Clear Gloss Varnish, following surface preparation instruction. The number of maintenance coats needed depends on the condition of the varnish system. Epifanes Clear Gloss Varnish may also be applied on any well cleaned, degreased and sanded two-component varnish. The weather and atmospheric conditions to which the finish is subjected will determine the amount of time between coats. An existing varnish system in poor condition must be removed. Weathered spots may be treated with a cleaning or bleaching product. If either are used, wash down the surface thoroughly with fresh water in order to remove any residue. Allow the surface to dry. 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.

Type	One-component clear wood finish based on modified alkyd/urethane resin . U.V. protecting. Epifanes Rapidclear, providing excellent protection in all climates, is the answer for a quick and easy alternative to conventional varnish.	
Color	Clear	
Gloss	Semi gloss	
Recommended use	For long term protection and enhancement of all marine and household woods. Interior and exterior wood above the waterline. Epifanes Rapidclear can be used for renewing weathered areas prior to a varnish system or as a full system for those requiring a quick and easy semi-gloss finish with maximum durability, UV protection and longevity.	
Characteristics	Epifanes Rapidclear provides an enhancing, U.V. protecting film. It bonds extremely well to teak and other oily woods, preventing discoloration and emphasizes the natural grain of the wood. NO SANDING BETWEEN COATS , excellent water resistance and flexibility. Rapidclear can be applied every 5-6 hours. Four to five coats are sufficient under most conditions. Easy touch up and maintenance.	
Container Size	750 ml.	
Density	.889 kg/liter (mixed)	
Solids Content	40 +/- 2 vol.% (mixed)	
Recommended film thickness	Per coat wet - 70 micron Per coat dry - 25 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 3 hours Dry - 4 hours	Tape free – 5 hours Recoatable - 5-6 hours
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid application in too much wind or sun.	

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One-component Rapidclear system on wood above the waterline

Surface Preparation:

Bare wood must be clean, dry and free of grease etc. Degrease with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol. Wiping down with mineral or white spirits, may leave an oily residue. Do not use water. Sand the bare wood to a fresh surface with 60 - 80 grit dry abrasive paper with the grain of the wood. A block may be used to assist in fairing the surface. Finish sand with 100 - 120 grit dry abrasive paper. Brush application with a good quality, clean, natural bristle brush will give good results. Try an Epifanes brush for the ultimate varnishing experience. Foam brushes are convenient on smaller projects however, are not suitable for larger jobs. "Roll and tip" is a great method for large flat areas. 3" foam roller followed by a bristle brush is the best combination.

Coats	Product	Thinner	Thinning Ratio %	Drying Time in hours	Abrasive paper grit	Abrasive paper type	Approx. coverage /	Remarks
First	Epifanes Rapidclear	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	
Second	Epifanes Rapidclear	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	
Third	Epifanes Rapidclear	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	
Fourth & Fifth	Epifanes Rapidclear	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	

Maintenance:

If existing coats of Rapidclear are intact, one or more coats may be applied on a well cleaned, and degreased surface. For annual maintenance, apply a minimum of one or two coats of Epifanes Rapidclear. The number of maintenance coats needed depends on the condition of the Rapidclear system. The weather and atmospheric conditions to which the finish is subjected will determine the amount of time between maintenance coats. Bare or weathered areas may be treated with a cleaning or bleaching product. If either are used, wash down the surface thoroughly with fresh water in order to remove any residue. Allow the surface to dry. Sand and apply three coats of Rapidclear as per instructions.

Type	One-component wood finish based on modified alkyd/urethane resin combined with colorfast pigments. UV protecting.	
Color	Lightly tinted. Retains traditional color of wood.	
Gloss	Semi gloss	
Recommended use	For long term protection and enhancement of all marine and household woods. Interior and exterior wood above the waterline. Rapidcoat can be used for renewing weathered areas, as a stain prior to a varnish system or as a full system for those requiring the absolute best in a quick and easy satin finish with maximum durability, U.V. protection and longevity	
Characteristics	Epifanes Rapidcoat provides a lightly tinted, U.V. protecting finish. Great breathing properties, good flexibility. It bonds extremely well to teak and any other oily wood, preventing discoloration and emphasizing the natural grain of the wood. Rapidcoat can be applied every 5-6 hours. Three coats is sufficient for most conditions. No sanding required. Easy touch up and maintenance.	
Container Size	750 ml.	
Density	.889 kg/liter (mixed)	
Solids Content	40 +/- 2 vol.% (mixed)	
Recommended film thickness	Per coat wet - 70 micron Per coat dry - 25 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 3 hours Dry - 4 hours	Tape free - 5 hours Recoatable - 5-6 hours
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid application in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability.	

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One-component Rapidcoat system on wood above the waterline

Surface Preparation:

Bare wood must be clean, dry and free of grease etc. Degrease with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol. Wiping down with mineral or white spirits, may leave an oily residue. Do not use water. Sand the bare wood to a fresh surface with 60 - 80 grit dry abrasive paper with the grain of the wood. A block may be used to assist in fairing the surface. Finish sand with 100 - 120 grit dry abrasive paper. Brush application with a good quality, clean, natural bristle brush will give good results. Try an Epifanes brush for the ultimate varnishing experience. Foam brushes are convenient on smaller projects however, are not suitable for larger jobs. "Roll and tip" is a great method for large flat areas. 3" foam roller followed by a bristle brush is the best combination.

Coats	Product	Thinner	Thinning Ratio %	Drying Time in hours	Abrasive paper grit	Abrasive paper type	Approx. coverage /	Remarks
First	Epifanes Rapidcoat	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	If using as a stain prior to varnish, apply, leave for a few minutes and rub out with a clean rag.
Second	Epifanes Rapidcoat	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	
Third	Epifanes Rapidcoat	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	
Fourth (optional)	Epifanes Rapidcoat	N/A	N/A	5-6 at 65F.	N/A	N/A	150 sq. feet	

Maintenance:

If existing coats of Rapidcoat are intact, one or more coats may be applied on a well cleaned, and degreased surface. For annual maintenance, apply a minimum of one or two coats of Epifanes Rapidcoat. The number of maintenance coats needed depends on the condition of the Rapidcoat system. The weather and atmospheric conditions to which the finish is subjected will determine the amount of time between maintenance coats. Bare or weathered areas may be treated with a cleaning or bleaching product. If either are used, wash down the surface thoroughly with fresh water in order to remove any residue. Allow the surface to dry. Sand and apply three coats of Rapidcoat as per instructions.

Type	One-component varnish alternative based on phenolic-modified alkyd resins and tung oil with microscopic porosity properties.	
Color	Opaque in the can. Dries clear amber.	
Gloss	Ultra high gloss	
Recommended use	Specifically formulated for oily woods like teak and iroco. For long lasting protection of all marine or household woods. Interior and exterior wood above the waterline.	
Film characteristics	Superior flow, gloss and durability. Excellent flexibility and water resistance in all climatic conditions. High build capability. Offers excellent adhesion to oily woods, especially teak. If recoated within 72 hours, does not require sanding.	
Container Size	500 ml., 1000 ml.	
Density	0.92 kg./liter	
Solids Content	50 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 50 micron Per coat dry - 30 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 2 hours Dry - 24 hours	Tape free - 24 hours Recoatable - 24 hours
Spray Application	Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 18 - 22 seconds Din Cup 4, 14 - 18 seconds Ford Cup 4. Nozzle 1.5 mm. - 1.8 mm. Pressure 2 - 3 Bar.	
Additives	Epifanes Accelerator, Epifanes Retarder	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid varnishing in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Epifanes Wood Finish Gloss is compatible with most other types of one-component alkyd or urethane based varnishes and over two-component varnishes. Any existing finish must be intact, degreased and sanded prior to recoating.	

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One-component varnish alternative on teak and oily or non-oily wood above the waterline

Surface Preparation:

Oily resinous tropical wood like teak, contains substances that may cause problems during and after finishing. i.e. slow drying or poor adhesion. These problems may be overcome by thorough and correct preparation and by the correct use of this product. Ensure that the wood is dry. Degrease the wood thoroughly with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol. Do not use water. Sand the bare wood to a fresh surface with 60 - 80 grit dry abrasive paper with the grain of the wood. A block may be used to assist in fairing the surface. Finish sand with 100 - 120 grit dry abrasive paper. For oily woods, finish sand to 220 grit dry abrasive paper. Brush application with a good quality, clean, natural bristle brush will give good results. Try an Epifanes brush for the ultimate varnishing experience.

System on oily and resinous woods (i.e. teak)

Coats	Product	Thinner	Thinning Ratio %	Drying Time	Abrasive if desired	Abrasive	Cvge./liter	Remarks
First	Epifanes WFG	Thinner P&V	25	24 at 65F.	320	Dry	130 sq. feet	Next coat within 72 hours does not need sanding.
4 more	Epifanes WFG	Thinner P&V	0-5	24 at 65F.	400	Wet or dry	130 sq. feet	

System on non-oily and non-resinous woods

First	Epifanes WFG	Thinner P&V	50	24 at 65F.	220	Dry	200-250 sq. ft.	Next coat within 72 hours does not need sanding.
Second	Epifanes WFG	Thinner P&V	25	24 at 65F.	280	Dry	160-200 sq. ft.	
Third	Epifanes WFG	Thinner P&V	15	24 at 65F.	280	Wet or Dry	130-160 sq. ft.	
At least 4 more	Epifanes WFG	Thinner P&V	0 - 5	24 at 65F.	400	Wet or Dry	130 sq. ft.	

Maintenance:

If the existing coats of Wood Finish gloss are intact and only a decrease of gloss is noticed, one or more coats may be applied on a well cleaned, degreased and sanded surface. Prepare the surface with 320 grit wet or dry abrasive paper. For the annual maintenance of Wood Finish Gloss over non-oily woods, apply a minimum of one or two coats, on a well cleaned, degreased and sanded surface.

Exterior protection in a matte finish!

Type	One-component varnish alternative based on urethane alkyd resins and tung oil.
Color	Opaque in the can. Dries clear amber.
Gloss	Matte (Some sheen)
Recommended use	Specifically formulated for oily woods like teak and iroco. For long lasting protection of all marine or household woods. Interior and exterior wood above the waterline. Best used over a build-up of Epifanes Clear Gloss Varnish, Epifanes Woodfinish Gloss or well cured Epifanes Polyurethane Clear Gloss.
Film characteristics	Rich matte finish. Hand rubbed appearance. Superior flow and durability. Good scratch and exterior weather resistance. Contains U.V. absorber. If recoated within 72 hours, does not require sanding.
Container Size	500 ml., 1000 ml.
Density	0.95 kg./liter
Solids Content	40 +/- 2 vol. %
Recommended film thickness	Per coat wet - 60 micron Per coat dry - 25 micron
Application	Brush, roller, conventional air spray, H.V.L.P., airless.
Drying times at 65F / 65% RH	Tack free - 1 hour Dry - 12 hours Tape free - 24 hours Recoatable - 12 hours
Spray Application	Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 20 - 24 seconds Din Cup 4, 16 - 20 seconds Ford Cup 4. Nozzle 1.5 mm. - 1.8 mm. Pressure 2 - 3 Bar.
Additives	Epifanes Accelerator, Epifanes Retarder
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid varnishing in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Epifanes Wood Finish Matte is compatible with most other types of one-component alkyd or urethane based varnishes and over two-component varnishes. Any existing finish must be intact, degreased and sanded prior to recoating. Always stir Woodfinish Matte prior to use.

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One-component matte varnish alternative on teak and oily or non-oily wood above the waterline

Surface Preparation:

Fill the bare wood to a smooth surface with Epifanes Clear Gloss Varnish, Epifanes Wood Finish Gloss or Epifanes Polyurethane Clear Gloss. Approx. 3 - 4 coats. These sealer coats provide maximum durability and U.V. protection (see leaflet on Clear Gloss Varnish, Wood Finish Gloss or Polyurethane Clear Gloss for application instructions). A build up of gloss also produces a finish with more depth and clarity. After build up, degrease with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol and sand coat with 320 or 400 grit wet or dry abrasive paper. Brush application with a good quality, clean, natural bristle brush will give good results. Try an Epifanes brush for the ultimate varnishing experience. Foam brushes are convenient on smaller projects however, are not suitable for larger jobs. "Roll and tip" is a great method for large flat areas. 3" foam roller followed by a bristle brush is the best combination.

Coats	Product	Thinner	Thinning Ratio %	Drying Time in hours	Abrasive paper grit	Abrasive paper type	Approx. coverage /	Remarks
First	Epifanes Woodfinish Matte	Brush Thinner For P & V	0 - 5	12 at 65F.	320 - 400	Wet or Dry	140 sq. feet	Always stir
Second	Epifanes Woodfinish Matte	Brush Thinner For P & V	0 - 5	12 at 65F.	400	Wet or Dry	140 sq. feet	If recoated within 72 hours sanding is not required.

Maintenance:

If existing coats of varnish are intact, one or more coats of Epifanes Woodfinish Matte may be applied on a well cleaned, degreased and lightly sanded surface. An existing varnish system in poor condition must be removed. Weathered spots may be treated with a cleaning or bleaching product. If either are used, wash down the surface thoroughly with fresh water in order to remove any residue. Allow the surface to dry. Smaller spots needing repair may be filled with several coats of Woodfinish Gloss or Clear Gloss Varnish. When an equal level has been achieved, sand to a smooth surface and apply one or more coats of Woodfinish Matte on the entire surface.

Rich, satin luster!

Type	One-component interior varnish based on urethane alkyd resins.
Color	Clear Amber, slightly opaque. Dries clear.
Gloss	Rich satin sheen.
Recommended use	Satin finishing coat for interior woodwork. Applied over several build up coats of Epifanes Clear Gloss Varnish, Epifanes Wood Finish Gloss or Epifanes Polyurethane Clear Gloss, provides maximum durability, clarity and depth. Household or marine. Softwood or hardwood. Cabin interior, cabin sole. Doors and trim.
Film characteristics	Hard satin finish. Good scratch and scuff resistance. Impervious to most onboard chemicals. Easy to apply.
Container Size	500 ml., 1000 ml.
Density	0.95 kg./liter
Solids Content	40 +/- 2 vol. %
Recommended film thickness	Per coat wet - 60 micron Per coat dry - 25 micron
Application	Brush, roller, conventional air spray, H.V.L.P., airless.
Drying times at 65F / 65% RH	Tack free - 1 hour Dry - 12 hours Tape free - 24 hours Recoatable - 12 hours
Spray Application	Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 20 - 24 seconds Din Cup 4. 16 - 20 seconds Ford Cup 4. Nozzle 1.5 mm - 1.8 mm. Pressure 2 - 3 Bar.
Additives	Epifanes Accelerator, Epifanes Retarder
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid varnishing in too much wind or sun. Any existing finish must be intact, degreased and sanded prior to recoating. Before applying each coat, degrease the surface with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol. Use a tack cloth to remove dust particles prior to application. Always stir Epifanes Rubbed Effect Interior Varnish before using. Failure to do so may result in an uneven or blotchy finish. Some settling of the formulation may occur upon long standing.

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One-component interior satin varnish system on wood above the waterline

Surface Preparation:

Fill the bare wood to a smooth surface with Epifanes Clear Gloss Varnish, Epifanes Wood Finish Gloss or Epifanes Polyurethane Clear Gloss. Approx. 3 - 4 coats. These sealer coats provide maximum durability and U.V. protection (see leaflet on Clear Gloss Varnish, Wood Finish Gloss or Polyurethane Clear Gloss for application instructions). A build up of gloss also produces a finish with more depth and clarity. After build up, degrease with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol and sand coat with 320 or 400 grit wet or dry abrasive paper. Brush application with a good quality, clean, natural bristle brush will give good results. Try an Epifanes brush for the ultimate varnishing experience. Foam brushes are convenient on smaller projects however, are not suitable for larger jobs. "Roll and tip" is a great method for large flat areas. 3" foam roller followed by a bristle brush is the best combination.

Coats	Product	Thinner	Thinning Ratio %	Drying Time in hours	Abrasive paper grit	Abrasive paper type	Approx. coverage /	Remarks
First	Rubbed Effect Interior Varnish	Brush Thinner For P & V	0 - 5	12 at 65F.	320 - 400	Wet or Dry	140 sq. feet	Always stir
Second	Rubbed Effect Interior Varnish	Brush Thinner For P & V	0 - 5	12 at 65F.	320 - 400	Wet or Dry	140 sq. feet	Always stir

Maintenance:

If existing coats of varnish are intact, one or more coats of Epifanes Rubbed Effect Interior Varnish may be applied on a well cleaned, degreased and lightly sanded surface. An existing varnish system in poor condition must be removed. Weathered spots may be treated with a cleaning or bleaching product. If either are used, wash down the surface thoroughly with fresh water in order to remove any residue. Allow the surface to dry. 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 Rubbed Effect Varnish on the entire surface.

The ultimate in hardness!

Type	Two-component clear finish based on unsaturated polyesters.	
Color	Water clear	
Gloss	Ultra high gloss	
Recommended use	For long lasting protection of all marine or household woods. Interior and exterior wood above the waterline. Due to the hard nature of this finish, Epifanes Polyurethane Clear Gloss is ideally suited for plywoods and coating epoxy resins. Perfect for saloon tables and cabin soles.	
Film characteristics	Superior flow, gloss and durability. High U.V. protection and resistance to abrasion, weathering, chemicals and loss of gloss. The outstanding flow characteristics make this two-component varnish highly suitable for both brush and spray application.	
Container Size	750 gr. (500 gr. base + 250 gr. reactor = 750 gr. mixed) 2:1 mix by weight.	
Density	1.08 kg./liter mixed	
Solids Content	45 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 80 micron Per coat dry - 35 micron	
Application	Brush, roller (phenolic core), conventional air spray, H.V.L.P.	
Drying times at 65F / 65% RH	Tack free - 1 hour Dry - 24 hours	Tape free - 18 hours Recoatable - approx. 24 hours
Spray Application	Conventional air: Thin as needed up to 10% with Epifanes Polyurethane Thinner For Spray. Spray viscosity 20 - 22 seconds Din Cup 4, 16 - 18 seconds Ford Cup 4. Nozzle 1.6 mm. - 1.8 mm. Pressure 2-3 Bar. Apply light tack coat to fully wet the surface. Allow 15-20 minutes to dry, then coat the entire surface. Airless spray not recommended.	
Additives	Epifanes Polyurethane Retarder	
Application conditions	Temperature should be between 60F. and 80F. during application. Air humidity below 70%. Avoid varnishing in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Any existing finish must be intact, degreased and sanded.	

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Two-component clear varnish system on wood above the waterline

Surface Preparation:

Bare wood must be clean, dry and free of grease etc. Degrease with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol. Wiping down with mineral or white spirits, may leave an oily residue. Do not use water. Sand the bare wood to a fresh surface with 60 - 80 grit dry abrasive paper with the grain of the wood. A block may be used to assist in fairing the surface. Finish sand with 100 - 120 grit dry abrasive paper. If desired, stain the wood at this time with a good quality water based stain. Do not color the varnish itself as this will create a muddy appearance. Brush application with a good quality, clean, natural bristle brush will give good results.

Coats	Product	Thinner	Thinning Ratio %	Drying Time in hours	Abrasive paper grit	Abrasive paper type	Approx. coverage /	Remarks
First	Epifanes PUCG	Brush Thinner For	10-15	24 at 65F.	220	Dry	130 sq. feet	If recoated within 48 hours, sanding is not required.
Second	Epifanes PUCG	Brush Thinner For	10-15	24 at 65F.	280	Dry	130 sq. feet	
Third	Epifanes PUCG	Brush Thinner For	0-10	24 at 65F.	320	Dry	130 sq. feet	
At least 3 more	Epifanes PUCG	Brush Thinner For	0-5	24 at 65F.	320-400	Wet or Dry	130 sq. feet	

Maintenance:

If existing coats of varnish are intact, one or more coats may be applied on a well cleaned, degreased and lightly sanded surface. Alternatively, the last two coats of Epifanes Polyurethane Clear Gloss Varnish may be replaced with two coats of Epifanes Clear Gloss Varnish. Allow 24 hours between coats and sand with 320-400 grit wet or dry abrasive paper. The one-component finish may be preferred if a more elastic topcoat is desired or required. The one-component finish also provides easier maintenance.

Hard, rich satin sheen!

Type	Two-component clear satin finish based on unsaturated polyesters.	
Color	Water clear	
Gloss	Rich satin sheen	
Recommended use	For interior use above the waterline. Finishing coat over Epifanes Polyurethane Clear Gloss Varnish.	
Film characteristics	Superior flow, gloss and durability. Excellent resistance to abrasion, weathering, chemicals and loss of gloss. The outstanding flow characteristics make this two-component varnish highly suitable for both brush and spray application.	
Container Size	750 gr. (500 gr. base + 250 gr. reactor = 750 gr. mixed) 2:1 mix by weight.	
Density	1.08 kg./liter mixed	
Solids Content	45 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 80 micron Per coat dry - 35 micron	
Application	Brush, roller (phenolic core), conventional air spray, H.V.L.P.	
Drying times at 65F / 65% RH	Tack free - 1 hour Dry - 24 hours	Tape free - 18 hours Recoatable - 24 hours
Spray Application	Conventional air: Thin as needed up to 10% with Epifanes Polyurethane Thinner For Spray. Spray viscosity 20 - 22 seconds Din Cup 4, 16 - 18 seconds Ford Cup 4. Nozzle 1.6 mm. - 1.8 mm. Pressure 2 - 3 Bar. Apply light tack coat to fully wet the surface. Allow 15 - 20 minutes to dry, then coat the entire surface. Airless spray not recommended.	
Additives	Epifanes Polyurethane Retarder	
Application conditions	Temperature should be between 60F. and 80F. during application. Air humidity below 70%. Avoid varnishing in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.	

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Two-component interior satin varnish system on wood above the waterline

Surface Preparation:

Fill the bare wood to a smooth surface with Epifanes Polyurethane Clear Gloss. Approx. 3 - 4 coats. These sealer coats provide maximum durability and U.V. protection (see leaflet on Polyurethane Clear Gloss for application instructions). A build up of gloss also produces a finish with more depth and clarity. After build up, degrease with Epifanes Spray Thinner For Paint & Varnish or denatured alcohol and sand coat with 320 or 400 grit wet or dry abrasive paper. Brush application with a good quality, clean, natural bristle brush will give good results. Try an Epifanes brush for the ultimate varnishing experience.

Coats	Product	Thinner	Thinning Ratio %	Drying Time in hours	Abrasive paper grit	Abrasive paper type	Approx. coverage /	Remarks
First	Epifanes Polyurethane Clear Satin	Brush Thinner For Polyurethane	0 - 5	24 at 65F.	320 - 400	Wet or Dry	130 sq. feet	If recoated within 48 hours, sanding is not required.
Second	Epifanes Polyurethane Clear Satin	Brush Thinner For Polyurethane	0 - 5	24 at 65F.	320 - 400	Wet or Dry	130 sq. feet	

Maintenance:

If existing coats of varnish are intact, one or more coats may be applied on a well cleaned, degreased and lightly sanded surface. Alternatively, the last two coats of Epifanes Polyurethane Clear Satin Varnish may be replaced with two coats of Epifanes Rubbed Effect Interior Varnish. Allow 24 hours between coats and sand with 320 - 400 grit wet or dry abrasive paper. The one-component finish may be preferred if a more elastic topcoat is desired or required. The one-component finish also provides easier maintenance.

High build! Fast build!

Type	Two-component varnish based on alkyd resin/isocyanate
Color	Clear
Gloss	High Gloss
Recommended use	High build, fast build, interior or exterior varnish for all types of wood. Insulation coat, sealer or filling coat in one and two-component synthetic or polyester based varnish systems. Insulating sealer for oily, greasy and vaporous woods such as teak and iroco. Fast drying. For exterior use, it is recommended to topcoat with two or more coats of Epifanes Clear Varnish, Epifanes Woodfinish Gloss or Epifanes Polyurethane Clear Gloss Varnish.
Properties	Seals off vaporous substances found in some exotic woods. Resistant to most onboard chemicals. Excellent interior gloss retention. Excellent impact and abrasion resistance.
Container Size	2000 ml. (1000 ml. base + 1000 ml. cure)
Density	1.05 kg./liter (mixed product)
Solids Content	45 +/- 2 vol. % (mixed product)
Recommended film thickness	Per coat wet 70 - 80 micron Per coat dry 30 - 35 micron
Application	Brush, roller, conventional air spray, H.V.L.P.
Application -brush or roller -air spray	Thin 0 - 10 % with Epifanes Thinner For PP Varnish Extra only as needed. Thin 10-15% with Epifanes Thinner For PP Varnish Extra. Spray viscosity 16-20 sec. DIN cup 4 - Nozzle 1.8 mm., pressure 2 - 3 Bar. Apply light tack coat to fully wet the surface. Allow 15 - 20 min. to dry, then fully spray the entire surface. Airless spray not advised.
Drying times at 65F / 65% RH	Dustdry - 1 hour Tack free -3 hours Recoatable - spray - 2.5 hours - brush - 5 hours
Application conditions	Temperature should be between 50F. and 80F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.

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Two-component PP Varnish Extra system

Surface Preparation: Bare wood must be dry and free of grease, etc. Degrease with Epifanes Spraythinner for Paint & Varnish or denatured alcohol. Do not use water. Sand bare wood with 60-80 grit abrasive paper with the grain of the wood. Subsequently sand with grits from 100 to 220. Brush application with a clean, longhaired bristle brush of good quality.

INTERIOR:

Number of Coats	Thinner	Thinning Ratio % (brush/roller)	Abrasive Grit	Sanding	Recoat Time 65F.	Notes
First	Thinner for PP Varnish	5 - 10	n/a	n/a	Within 24 hours, no sanding required	Can be recoated after 5 hours
Second	Thinner for PP Varnish	5	280 Dry	After 24 hours	Within 24 hours, no sanding required	Can be recoated after 5 hours
Third	Thinner for PP Varnish	0 - 5	360 Wet or Dry	After 24 hours	Within 24 hours, no sanding required	Can be recoated after 5 hours
More as needed	Thinner for PP Varnish	0 - 5	360 Wet or Dry	After 24 hours	Within 24 hours, no sanding required	Can be recoated after 5 hours

EXTERIOR:

Number of Coats	Thinner	Thinning Ratio % (brush/roller)	Abrasive Grit	Sanding	Recoat Time 65F.	Notes
First	Thinner for PP Varnish	5 - 10	n/a	n/a	Within 24 hours, no sanding required	Can be recoated after 5 hours
Second	Thinner for PP Varnish	5	280 Dry	After 24 hours	Within 24 hours, no sanding required	Can be recoated after 5 hours
Third	Thinner for PP Varnish	0 - 5	n/a	n/a	Within 24 hours, no sanding required	Can be recoated after 5 hours
Fourth	Thinner for PP Varnish	0 - 5	(see below)	After 24 hours	n/a	Must be topcoated

When a satin finish is desired: Sand last coat to 220 grit, apply one or more coats of Epifanes Rubbed Effect Interior Varnish. Sand between coats with 320 grit wet or dry abrasive paper. If desired, replace Rubbed Effect with Epifanes Polyurethane

After the fourth coat, sand with 220 grit wet or dry abrasive paper (if topcoating with a one-component product) or 320 wet or dry (if topcoating with a two-component product). Topcoat with three or more coats of Epifanes Clear Gloss Varnish,

Type	One-component wood oil based on linseed oil and alkyd resins.
Color	Amber
Gloss	n/a
Characteristics	An impregnating oil for the maintenance and protection of teak and other oily and/or resinous types of wood. Accentuates the natural grain color. Ideal for use on teak decks. Protects the wood from discoloration caused by weather or pollutants. Easy to apply with wide brush or lint-free cloth.
Recommended use	All clear wood areas where a less slippery surface is desired (decks, boarding ladders etc.). May also be applied on hand holds, railings etc.
Container Size	1000 ml.
Density	0.91 kg/liter
Solids Content	50 +/- 2 vol. %
Theoretical Coverage	Approx. 100 sq. ft./liter
Practical Coverage	Dependent on absorption characteristics of substrate, method of application, loss of material due to the shape of surface and other possible circumstances during application.
Thinner	Epifanes Brush Thinner For Paint & Varnish
Application	Apply wet-on-wet until saturation of the wood has been achieved. Saturation point depends on the dryness and/or density of the wood. Normally, two coats are sufficient. Excessive film build-up must be avoided. Remove surplus material with a lint-free cloth. Apply with a wide brush or lint-free cloth.
Maintenance interval	Dependent on climate conditions and exposure to weather.

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CHAPTER TWO



PAINTS

10 Pages

Flexibility and durability!

Type	One-component yacht coating based on oil modified alkyd resins.	
Color	42 Colors. See Epifanes Color chart.	
Gloss	Ultra high gloss.	
Recommended use	Finishing coat for wood, steel, aluminum and fiberglass in conjunction with the appropriate primers. For interiors and exteriors above the waterline. Absolutely the best for traditional wood construction.	
Film characteristics	Superior flow, gloss and durability. Excellent flexibility and water resistance in all climatic conditions. Fresh and salt water resistant. Vivid color brilliance. Outstanding wet edge and covering properties.	
Container Size	All colors 750 ml. White also available in 2000 ml. and 4000 ml.	
Density	0.95 - 1.30 kg./liter (dependent on color)	
Solids Content	50 - 55 +/- 2 vol. % (dependent on color)	
Recommended film thickness	Per coat wet 60 - 70 micron Per coat dry 30 - 35 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 3 hours Dry - 24 hours	Tape free - 24 hours Recoatable - 24 hours
Spray Application	Conventional air: Thin as needed up to 20% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 18 - 22 seconds Din Cup 4, 14 - 18 seconds Ford Cup 4. 1.5 mm. - 1.8 mm. Pressure 2 - 3 Bar.	
Additives	Epifanes Accelerator, Epifanes Retarder	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Epifanes Yacht Enamel is compatible with most other types of one-component alkyd or urethane based paints and over two-component paints. Any existing finish must be intact, degreased and sanded prior to recoating.	

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Finishing Epifanes Yacht Enamel

Surface Preparation: See leaflet “Surface Preparation”. **Primer System:** Further details on various Epifanes Primers Sheets

	Wood / Plywood	Fiberglass	Steel	Aluminum
Primer	Werdol Woodprimer	Epifanes Fiberglass Primer	Werdol Metalprimer	Epifanes Washprimer AQ +Epifanes Epigrond
Thinner	Epifanes Thinner P & V	Epifanes Thinner P & V	Epifanes Thinner P & V	n/a
Thinning Ratio	0-5%	0-5%	0-5%	n/a
Number of Coats	one or two	one or two	at least three	one
Drying Time	24 hours	24 hours	24 hours	24-48 hours
Sanding Grit	180-220 dry	320 dry	220 dry	n/a

Topcoat	Product	Thinner (brush/roller)	Thinning Ratio %	Drying time in hours at 65 F.	Abrasive Paper Grit	Type	Coverage per ltr.		Airspray	Airless
First	Epifanes Yacht Enamel	Epifanes Brush- thinner P & V	5	24	360	Wet	160 sq. ft. 15 sq. m.	Thinner	Sprayth. P.V	Sprayth. P.V
At least two	Epifanes Yacht Enamel	Epifanes Brush- thinner P & V	0-5	24	400	Wet	160 sq. ft. 15 sq. m.	Ratio	15-20%	5-10%
								Viscosity	20-24 sec.	35-50 sec.
								DIN	Cup 4	Cup 4
								Nozzle	1.6-1.8 mm	0.011-0.013”
								Pressure	2-3 bar	80-100 bar

Maintenance: If existing paint system is intact and only loss of gloss is noticed, one or more fresh coats Epifanes Yacht Enamel may be applied on a well cleaned degreased surface that is sanded with 320 grit wet or dry abrasive paper. A paint system in poor condition must be removed.

Hardest finish available in a one-part paint!

Type	One component, air dry, ultra high gloss finish based on urethane alkyd resins.	
Color	19 colors. See Epifanes color chart.	
Gloss	Ultra high gloss	
Recommended use	Finishing coat for wood, steel, aluminum and fiberglass in conjunction with the appropriate primers. For exterior use above the waterline, topsides and interiors . Can be applied directly on thoroughly degreased and sanded fiberglass, one-component primers and top coats as well as on thoroughly sanded two-component polyurethane. This finish is not compatible with epoxy.	
Film characteristics	This one-component urethane formulation was developed to provide the application ease of a traditional enamel with the hard durability of a urethane resin base. Fresh and salt water resistant, long lasting weather durability and gloss retention, rapid wet film drying.	
Container Size	750 ml.	
Density	0.95 - 1.30 kg./liter (dependent on color)	
Solids Content	50 - 55 +/- 2 vol. %.	
Recommended film thickness	Per coat wet - 60 micron Per coat dry - 35 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 1 hour Dry - 24 hours	Tape free - 24 hours Recoatable - 24 hours
Spray Application	Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 18 - 22 seconds Din Cup 4, 14 - 18 seconds Ford Cup 4. Nozzle 1.5 mm. - 1.8 mm. Pressure 2 - 3 Bar.	
Additives	None	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Epifanes Monourethane is compatible with most other types of one-component alkyd or urethane based paints and over two-component paints.	

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Finishing Epifanes Monourethane

Surface Preparation: See leaflet Surface Preparation **Primer System:** Further details on various Epifanes Primers Sheets

	Marine Plywood	Fiberglass	Steel	Aluminum
Primer	Werdol Woodprimer	Epifanes Fiberglass Primer	Werdol Metalprimer	Epifanes Washprimer AQ +Epifanes Epigronnd
Thinner	Epifanes Thinner P & V	Epifanes Thinner P & V	Epifanes Thinner P & V	n/a
Thinning Ratio	0-5%	0-5%	0-5%	n/a
Number of Coats	one or two	one or two	at least three	one
Drying Time	24 hours	24 hours	24 hours	24-48 hours
Sanding Grit	180-220 dry	320 dry	220 dry	n/a

Top-Coat	Product	Thinner (brush/roller)	Thinning Ratio %	Drying time at 65 F.	Abrasive Paper Grit Type		Coverage per ltr.		Airspray	Airless
								Thinner	Sprayth. P.V	Sprayth. P.V
First	Epifanes Monourethane	Epifanes Brush-thinner P & V	5	24 hours	320	Wet	160 sq. ft. 15 sq. m.	Ratio	10-15%	5-10%
At least two	Epifanes Monourethane	Epifanes Brush-thinner P & V	0-5	24 hours	400	Wet	160 sq. ft. 15 sq. m.	Viscosity	18-22 sec.	35-50 sec.
								DIN	Cup 4	Cup 4
								Nozzle	1.5-1.8 mm	0.011-0.013"
								Pressure	2-3 bar	80-100 bar

Maintenance: If existing paint system is intact and only loss of gloss is noticed, one or more fresh coats of Epifanes Monourethane may be applied on a well cleaned degreased surface that is sanded with 320 grit wet or dry abrasive paper. A paint system in poor condition must be removed.

Hardest, toughest, longest lasting!

Type	Two-component polyester saturated aliphatic urethane finish.
Color	19 Colors (see colorchart). Custom colors on request.
Gloss	Ultra High Gloss
Recommended use	Exterior topsides and interior use. Finishing coat for fiberglass, steel, aluminum and wood. For use on all epoxy primed substrates or direct application on unpainted wood or thoroughly cleaned and degreased fiberglass surfaces above the waterline.
Properties	Excellent resistance to abrasion, weathering, chemicals and loss of gloss. The outstanding flow characteristics make this two-component topcoat highly suitable for both brush, roller and spray application.
Container Size	750 gr. (500 gr. base + 250 gr. reactor = 750 gr. mixed) 2:1 mix by weight.
Density	1.00 - 1.40 kg./liter (mixed product) (depending on color)
Solids Content	50 - 55 +/- 2 vol. % (mixed product) (depending on color)
Recommended film thickness	Per coat wet 80 micron Per coat dry 40 - 45 micron
Application	Brush, roller, conventional air spray, H.V.L.P.
Application -brush or roller -air spray	Thin 0 - 10 % with Epifanes P.U. Brushthinner Thin up to 10 % with Epifanes P.U. Spraythinner. Spray viscosity 20-22 sec. DIN cup 4 - Nozzle 1.8 mm., pressure 2 - 3 Bar. Apply light tack coat to fully wet the surface. Allow 15 - 20 min. to dry, then fully spray the entire surface. Airless spray not advised.
Drying times at 65F / 65% RH	Tack free -3 hours Tape free - 7 hours Hard dry - 8 hours Recoatable -24 hours
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.

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Epifanes Polyurethane Topcoat

Surface Preparation: See leaflet “Surface Preparation”.

Primer System: Further details on applicable Epifanes Primer Sheets.

	Marine Plywood	Fiberglass	Steel	Aluminum
Primer	Epifanes Epoxy Primer	Epifanes Epoxy Primer	Epifanes Epoxy Primer	Epifanes Washprimer AQ
Thinner	Epifanes Thinner D-601	Epifanes Thinner D-601	Epifanes Thinner D-601	n/a
Thinning Ratio	0-5%	0-5%	0-5%	n/a
Number of Coats	one or two	one	at least three	one
Drying Time	24 hours	24 hours	12 hours	2-48 hours
Sanding Grit	220 dry	220 dry	220 dry	n/a

Coats	Product	Thinner (brush/roller)	Thinning Ratio %	Drying time in hours at 65F.	Abrasive Paper Grit Type	Coverage per kg.	Airspray
At Least Three	Epifanes Polyurethane Topcoat	Epifanes P.U. Brusthinner	0-5	24	320 Wet	130 sq. ft.	Epifanes Polyurethane
							Ratio 10%
							Viscosity 20-22 sec. DIN cup 4
							Nozzle 1.6-1.8 mm
							Pressure 2-3 bar

If existing paint system is intact and only loss of gloss is noticed, one or more fresh coats of Epifanes Polyurethane Topcoat may be applied on a well cleaned, degreased surface that is sanded with 320 grit wet or dry abrasive paper. If required use Epifanes Epoxy Primer first. A paint system in poor condition must be removed. If subsequent coat is applied within 48 hours, sanding between coats is not necessary. The application by airless spray is not advised.

Highest gloss, non-yellowing, minimal dirt retention!

Type	One-component finish paint based on silicon reinforced modified alkyd resins.	
Color	White, #24 Oyster, #25 Off white.	
Gloss	Ultra high gloss. A degree of gloss is activated by exposure to Ultra Violet.	
Recommended use	Finishing coat for wood, steel, aluminum and fiberglass in conjunction with the appropriate primers. For exterior use above the waterline, topsides and interiors. Can be applied directly on thoroughly degreased and sanded fiberglass, one-component primers and top coats as well as on thoroughly sanded polyurethane.	
Film characteristics	Superior flow, gloss and durability. Excellent flexibility and water resistance in all climatic conditions. Non-yellowing, minimal dirt retention. Easy application and rapid wet film drying. Optimum covering and filling capacity.	
Container Size	750 ml., White also available in 2000 ml.	
Density	1.18 kg./liter	
Solids Content	50 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 70 micron Per coat dry - 35 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 2 hours Dry - 24 hours	Tape free - 18 hours Recoatable - 18 hours
Spray Application	Conventional air: Thin as needed up to 20% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 18 - 22 seconds Din Cup 4. Nozzle 1.5 mm. - 1.8 mm. Pressure 2 - 3 Bar.	
Additives	None (may effect gloss, flow or non-yellowing characteristics).	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Epifanes Nautiforte is compatible with most other types of one-component alkyd or urethane based paints and over two-component paints. Any existing finish must be intact, degreased and sanded prior to recoating.	

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Surface Preparation: See leaflet “Surface Preparation”. **Primer System:** Further details on various Epifanes Primers Sheets

	Wood / Plywood	Fiberglass	Steel	Aluminum
Primer	Werdol Woodprimer	Epifanes Fiberglass Primer	Werdol Metalprimer	Epifanes Washprimer AQ +Epifanes Epigrond
Thinner	Epifanes Thinner P & V	Epifanes Thinner P & V	Epifanes Thinner P & V	n/a
Thinning Ratio	0-5%	0-5%	0-5%	n/a
Number of Coats	one or two	one or two	at least three	one
Drying Time	24 hours	24 hours	24 hours	24-48 hours
Sanding Grit	180-220 dry	320 dry	220 dry	n/a

Topcoat	Product	Thinner (brush/roller)	Thinning Ratio %	Drying time in hours at 65 F.	Abrasive Paper		Coverage per ltr.			
					Grit	Type		Airspray	Airless	
First	Epifanes Nautiforte	Epifanes Brush- thinner P & V	5	24	360	Wet	150 sq. ft. 14 sq. m.	Thinner	Sprayth. P.V	Sprayth. P.V
								Ratio	20%	5%
At least two	Epifanes Nautiforte	Epifanes Brush- thinner P & V	0-5	24	400	Wet	150 sq. ft. 14 sq. m.	Viscosity	20-22 sec.	35-50 sec.
								DIN	Cup 4	Cup 4
								Nozzle	0.12-0.16 mm	0.011-0.013”
								Pressure	2-3 bar	80-100 bar

Maintenance: If existing paint system is intact and only loss of gloss is noticed, one or more fresh coats Epifanes Nautiforte may be applied on a well cleaned degreased surface that is sanded with 320 grit wet or dry abrasive paper. A paint system in poor condition must be removed.

Type	One-component enamel based on alkyd / urethane resins	
Color	White	
Gloss	Eggshell	
Recommended use	Eggshell finish for interior use on wood, steel, fiberglass and aluminum in conjunction with the appropriate primer systems. For maintenance of existing, intact interior finishes.	
Properties	Quick drying, smooth hard satin finish with beautiful, long-lasting protection. Resistant to water, alcohol, most onboard chemicals and abrasion.	
Container Size	750 ml.	
Density	1.22 kg./liter	
Solids Content	60 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 60 micron Per coat dry - 35 micron	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 3 hours Dry - 12 hours	Tape free - 24 hours Recoatable - 24 hours
Application - brush - spray	Thin as needed with Epifanes Brush Thinner For Paint & Varnish up to 5%. Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 20 - 24 seconds Din Cup 4. 16 - 20 seconds Ford Cup 4. Nozzle 1.5 mm - 1.8 mm. Pressure 2 - 3 Bar.	
Additives	Epifanes Accelerator, Epifanes Retarder	
Application notes	Epifanes Eggshell Enamel is best used as a finish coat over a build-up of Epifanes Yacht Enamel, Monourethane, Two-part Polyurethane or, Nautiforte. Eggshell Enamel can be used over most other types of one-component alkyd or urethane based paint and over properly sanded two-component paints. See appropriate application and preparation instructions. Coverage approx. 140 sq. ft./liter.	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.	

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Type	One-component semi-gloss urethane-alkyd resin based deckpaint containing polypropylene beads as a nonskid agent.
Color	White, Cream #1, Gray # 212 (see color chart).
Gloss	Eggshell
Recommended use	Nonskid finishing coat for wood, steel, aluminum and fiberglass in conjunction with the appropriate primers. For exterior and interior use above the waterline.
Properties	Excellent color retention, cleans easily and stands up to rough wear. Polypropylene beads are considered superior as a non-skid agent because the beads absorb a portion of the finish maintaining color retention and structural integrity. Provides even coverage when rolled.
Container Size	750 ml.
Density	1.10 - 1.30 kg./liter
Solids Content	60 +/- 2 vol. %
Recommended film thickness	Per coat wet 100 micron Per coat dry 60 micron
Application	Best by roller, or brush.
Thinner	Epifanes Brushthinner for Paint and Varnish
Drying times at 65F / 65% RH	Tack free - 1 hour Hard dry - 24 hours Tape free - 24 hours Recoatable - 24 hours Note: Allow 72 hours before walking on last coat.
ApplicationNotes	See instructions "Finishing Yacht Enamel". Replace topcoats with Nonskid. Coverage approx. 80 sq. ft. per liter.
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Epifanes Nonskid Deckcoating can be used over most types of one-component alkyd or urethane-based paint systems and over properly sanded two-component paint systems.

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CHAPTER THREE



PRIMERS

6 Pages

Type	One-component airdrying primer for wood, based on alkyd resin	
Color	White, Gray	
Gloss	Eggshell	
Recommended use	Undercoat for bare wood surfaces in one-component paint systems above the waterline. For exterior and interior use. Excellent build and sandability.	
Container Size	750 ml., 2000 ml., 4000 ml.,	
Density	1.10 - 1.50 kg./liter (depending on color)	
Solids Content	55 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 80 micron Per coat dry - 45 micron	
	Werdol Woodprimer is an airdrying product. Avoid applying too thick a wet film in order to prevent drying problems.	
Coverage	Approx. 110 sq. ft./liter	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 2 hours Dry - 15 hours	Tape free - 24 hours Recoatable - 24 hours
SprayaApplication	Conventional air: Thin as needed up to 20% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 18 - 22 seconds Din Cup 4, 23 - 28 seconds Zahn Cup 2, 20-24 seconds Ford Cup 4.	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.	

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Maximize adhesion over fiberglass

Type	One-component primer for fiberglass, based on modified alkyd resins.	
Color	White. May be tinted with the appropriate finish, if desired.	
Gloss	Eggshell	
Recommended use	Primer for fiberglass or gelcoat above the waterline prior to the application of one-component topcoats. Maximizes adhesion.	
Properties	Excellent direct adhesion to fiberglass or intercoat adhesion to one-component yacht paints. Fills very small surface irregularities to a smooth film. High-build and excellent covering capability, creating an even primer coat. This is especially important when topcoating with a different color .	
Container Size	750 ml., 2000 ml., 4000 ml.,	
Density	1.50 kg./liter	
Solids Content	50 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 70 micron Per coat dry - 35 micron	
Coverage	Approx. 110 sq. ft./liter	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 1 hours Dry - 12 hours	Tape free - 24 hours Recoatable - 24 hours
Spray application	Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 20 - 24 seconds Din Cup 4. 16 - 20 seconds Ford Cup 4. Nozzle 1.5 mm - 1.8 mm. Pressure 2 - 3 Bar.	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.	
Recoatable with	Epifanes Yacht Enamel, Monourethane or Nautiforte.	

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Type	One-component, air-drying undercoat, based on modified alkyd urethane resins.	
Color	White	
Gloss	Eggshell	
Recommended use	Intermediate coat for use over all types of one-component anti-corrosive systems above the waterline. Primer over Epifanes Washprimer AQ.	
Properties	High build, good sandability, provides excellent adhesion for all one-component alkyd and/or urethane-based topcoats.	
Container Size	750 ml., 2000 ml., 4000 ml.,	
Density	1.50 kg./liter	
Solids Content	60 +/- 2 vol. %	
Recommended film thickness	Per coat wet - 70 micron Per coat dry - 45 micron	
Coverage	Approx. 110 sq. ft./liter	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 1 hours Dry - 12 hours	Tape free - 24 hours Recoatable - 24 hours
Spray Application	Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 20 - 24 seconds Din Cup 4. 16 - 20 seconds Ford Cup 4. Nozzle 1.5 mm - 1.8 mm. Pressure 2 - 3 Bar.	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.	
Recoatable with	Epifanes Yacht Enamel, Monourethane or Nautiforte	

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Type	One-component air-dry anti-corrosive primer, based on alkyd/urethane resin and zinc phosphate.	
Color	White, Gray	
Gloss	Eggshell	
Recommended use	Prime coat in a one-component paint system for steel above the waterline. Maintenance primer on existing one-component paint systems.	
Properties	Excellent rust prevention. High-build, excellent covering capability. Good sandability.	
Container Size	750 ml., 2000 ml., 4000 ml.	
Density	1.35 kg./liter	
Solids Content	60 +/- 2 vol. %	
Recommended film thickness	Per coat wet 70 micron Per coat dry 45 micron	
Coverage	Approx. 110 sq. ft./liter	
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free -3 hours Hard dry - 8 hours	Tape free - 7 hours Recoatable -12 hours
Application - brush - spray	Thin as needed up to 5% with Epifanes Brush Thinner For Paint & Varnish. Conventional air: Thin as needed up to 15% with Epifanes Spray Thinner for Paint & Varnish. Spray viscosity 20 - 24 seconds Din Cup 4. 16 - 20 seconds Ford Cup 4. Nozzle 1.5 mm - 1.8 mm. Pressure 2 - 3 Bar.	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.	

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Best adhesion below the waterline!

Type	Two-component adhesion primer, based on epoxy-vinyl resins.	
Color	White. May be tinted with the appropriate finish, if desired.	
Gloss	Matte	
Recommended use	Adhesion primer on fiberglass and two-component substrates (e.g. epoxy based) to ensure optimum adhesion of subsequent one-component product. For use above and below the waterline.	
Properties	Excellent adhesion on fiberglass and epoxy-based coatings.	
Container Size	750 ml.	
Density	1.30 kg./liter	
Solids Content	40 +/- 2 vol. %	
Coverage	Approx. 85 sq. ft./liter	
Mixing Ratio	Component A.	6 vol. parts - 90 weight parts
	Component B. (cure)	1 vol. part - 10 weight parts
Application	Brush, roller, conventional air spray, H.V.L.P., airless.	
Drying times at 65F / 65% RH	Tack free - 1 hour	Tape free - 24 hours
	Hard dry - 12 hours	Recoatable - 18 hours (one-com) - 4 hours (two-comp)
SprayaApplication	Conventional air: Thin as needed up to 15% with Epifanes Thinner D-601. Spray viscosity 20 - 24 seconds Din Cup 4. 16 - 20 seconds Ford Cup 4. Nozzle 1.5 mm - 1.8 mm. Pressure 2 - 3 Bar	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents. Do not sand Interim Coat.	
Recoatable with	Any type of one or two-component paint or coating, including anti-fouling.	

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Type	Two-component anti-corrosive primer based on epoxy resin with zinc phosphate as the anti-rust agent.	
Color	White.	
Gloss	Semi-gloss	
Recommended use	Filling primer in a two-component paint system on wood (ply) and fiberglass, and as an anti-rust primer in a two-component paint system on steel and aluminum. For interior and exterior use above or below the waterline. Recoatable with all Epifanes two-component products.	
Container Size	750 ml., 2000 ml. (100 parts comp. A to 14 parts comp. B by weight).	
Density	1.82 kg/liter (mixed)	
Solids Content	50 +/- 2 vol.% (mixed)	
Recommended film thickness	Per coat wet - 80 micron Per coat dry - 40 micron	
Coverage	Approx. 100 sq. ft./liter	
Application	Brush, roller, conventional air spray, H.V.L.P.	
Drying times at 65F / 65% RH	Dust free - 45 minutes Tack free - 1 hour	Recoatable - 12 hours Full cure - 7 days
Spray Application	Conventional air: Thin as needed up to 10% with Epifanes D-601 Thinner Nozzle 1.5 - 1.8 mm. Pressure 3 - 4 bar.	
Application conditions	Temperature should be between 50F. and 85F. during application. Air humidity below 85%. Avoid painting in too much wind or sun. A rapid loss of solvents will occur under these conditions and will decrease the flowing ability. Add thinner up to the specified percentage to compensate for the faster release of solvents.	

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CHAPTER FOUR



BRUSHES & ACCESSORIES

1 Pages

BRUSHES

Type	Natural Chinese bristle, set in epoxy with a nickel plated ferrule. Bristle ends are individually split and hand chiseled. Varnished hardwood handle
Use	One or two-component paints or varnishes.
Characteristics	<p>Round Style - A European style. The volume of bristle gives great holding capacity. Originally designed for rails etc. this style ensures even flow of product on rounded edges. Excellent for trim.</p> <p>Oval Style - This oval shaped brush has the same qualities as the round style but, provides a slower release of product. Falling somewhere in between the "Round" and "Full", this brush is ideal for varnish.</p> <p>Full - Elliptical in shape, this brush most resembles the American flat brush but, has a much greater holding capacity. The bristles are short enough to offer good control when using high solids content paints or varnishes yet still offers exceptional softness at the bristle ends. This is a great all purpose brush.</p>
Size	Round - 3/8", 1/2", 3/4". Oval - 1 3/8", 1 3/4", 2". Full - 1 1/2", 2", 2 1/4", 2 1/2", 3".
Care	We recommend storing Epifanes brushes suspended in a bath of diesel fuel. This kind of wet storage combined with a mineral spirit rinse and spin several times, before and after use will give you 10 - 20 years of good service. Due to its oiliness and low evaporation rate, diesel keeps the brushes clean and the bristles soft. Refresh the diesel twice a year.
Notes	These brushes will give you the ultimate varnishing experience. As with any tool, quality can add immensely to the overall success of your project.

BRUSHKEEPER

Description	Keep your good brushes soft and clean by storing them in the Epifanes Brushkeeper. Translucent polyethylene container measures 5" X 5" X 14" tall and holds one to eight brushes suspended in kerosene or diesel by a cleverly designed removable rack. A tightfitting lid prevents spills and evaporation.
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ROLLERS

Description	We have looked long and hard for these items! Imported from Germany, this roller cover, tray and handle combination is absolutely perfect for applying any of our paints and varnishes. Covers are low profile, high density foam, 4" in length with a 3/8" nap. Handles are available in 10" or 16" lengths. Trays (very tough to find in this width) measure 5 1/2" by 11" in length. Sold in combination or separately.
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CHAPTER FIVE



TECHNICAL ADVICE

3 Pages



Degreasing:

Before sanding, be sure the surface is clean and well degreased. Most dirt can be removed with water and ammonia.

Surfaces to be degreased:

- Existing paint layers - Epifanes Spraythinner for P & V
- Bare wood - Epifanes Spraythinner for P & V
- Tropical bare wood - Epifanes Spraythinner for P & V
- Bare steel - Epifanes Epoxythinner
- Aluminum - Epifanes Spraythinner for P & V
- Fiberglass - Epifanes Fiberglass Prep.Cleaner

Sanding & Adhesion:

Thorough sanding is required to ensure optimum adhesion between coats and to create a smooth undercoat. Unless instructed differently, sand every coat of finish before applying a new coat. Each surface requires a particular type and grit of sandpaper. Bare surfaces, primers, undercoats and fillers need to be dry sanded in order to avoid the intake of moisture. Sanding between topcoats can best be executed with a fine grit wet sandpaper and water. One should avoid visible sanding scratches in the topcoat. When (dry) sanding, we recommend wearing an appropriate dust mask to avoid breathing fine dust particles. When sanding products containing lead or chromate, it is imperative that one wears an appropriate breathing apparatus. The recommended type of sandpaper and grit are determined in each system.

Recoating:

An important consideration when (re) painting existing, unknown surfaces, is the choice of the correct product. In general, when a surface has been previously painted there are two possibilities. Either a one-component paint system or a two-component paint system has been applied.

By placing a cloth saturated with EPIFANES Fiberglass Prep Cleaner on the surface to be painted for 15 minutes, the difference will become evident. If the Fiberglass Prep Cleaner reacts as a paint remover and begins to wrinkle the paint, it is a one-component paint. If the paint remains intact, you are most definitely dealing with a two-component paint product. In principle, a one-component paint may be applied onto a well cleaned and sanded (320 grit wet or dry abrasive paper) two-component paint coat. The bond is acquired mechanically by roughing the surface. A two-component product however, may not be applied over a one-component paint coat, as the solvents of the two-component product will react as a paint remover on the one-component coat.



Surface Preparation and Painting:

- Make sure that the application and the drying of paint surfaces is performed in well-ventilated areas and obey 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.
- Make sure that the surface is dry and free of all dirt, wax, oil, rust, dust and other contaminants.
- Use only appropriate, clean and dry tools.
- Use clean, longhaired, soft bristle brushes of good quality. Preferably EPIFANES brushes.
- When applying two-component products, use only paint rollers that are resistant to the (aggressive) solvents in these paints, like nylon or sheepskin.
- For the application of one-component paints use foam rollers.
- For the application of varnish, we recommend very fine (1/8" nap) foam rollers or lint free mohair rollers.
- Only work in dry, draft free and dust free surroundings.
- Do not paint in direct sunlight or under humid conditions.
- Be aware of condensation following the application of paint. Moisture can settle into the wet film causing the paint to lose its gloss. In particular, two-component paints are susceptible to this problem.
- When applying one-component products, the minimum application and surface temperature should be no less than 40 F. (5 C). Two- component products should not be applied in temperatures under 50- 55 F. (10-12 C).
- During application, the relative humidity should not exceed 85%. When applying two-component products, a maximum humidity level of 70% should be observed. Application of paint in conditions above or below these levels may have repercussions on the drying and hardening qualities of the product.
- The minimum temperature of the object to be painted should be 5 F. (3 C.) above the point of condensation.
- Before painting, ensure that the surface is dry.
- When painting overhead on cold (er) days, be aware of condensation from your breath on the cold surface.
- Avoid applying too heavy a film thickness, causing drying problems and wrinkling. It is often better to apply two thin coats than one thick coat.
- Distribute the paint evenly.
- Do not thin more than necessary. Too much thinning causes sags and insufficient film thickness. A thin coating provides only limited protection that can lead to rapid loss of gloss. Too little thinning may influence the flow. Only use the recommended thinners. Avoid the use of other additives. The thinning percentage depends on the temperature of the paint and the surrounding conditions. The recommended percentages are only guidelines.
- In order to avoid possible color differences, always use paints with the identical batch number, found on the bottom of each container.
- Before painting, make sure the paint is mixed well. There may be deposits and/or pigments lying beneath the lip or on the sides and bottom of the container.
- Try to avoid the intake of air into the paint by stirring too aggressively.



Maintenance:

An important consideration when (re) painting existing, unknown surfaces is the choice of the correct product. In general, when a surface has been previously painted there are two possibilities. Either a one-component paint system or a two-component paint system has been applied.

By placing a cloth saturated with EPIFANES Fiberglass Prep Cleaner on the surface to be painted for 15 minutes, the difference will become evident. If the Fiberglass Prep Cleaner reacts as a paint remover and begins to wrinkle the paint, it is a one-component paint. If the paint remains intact, you are most definitely dealing with a two-component paint product. In principle, a one-component paint may be applied onto a well-cleaned and sanded (320 grit wet or dry abrasive paper) two-component paint coat. The bond is acquired mechanically by roughing the surface. A two-component product however, may not be applied over a one-component paint coat, as the solvents of the two-component product will react as a paint remover on the one-component coat.

COMMON PROBLEMS:

The paint does not dry thoroughly:

The temperature is too cool for good flow, there is not enough air circulation, or too thick a layer has been applied. Applying too thick a coat may entrap solvents in the paint. Drying problems can also occur by applying a one-component product directly onto a "too fresh" epoxy or fiberglass coat. The required amount of time for thorough drying depends on the amount of solvents remaining in the original coat. In some cases thorough drying may not occur at all. These coats must be removed.

The coat has developed wrinkles:

Wrinkling of paint coats can be caused by the application of too thick a layer (often on horizontal surfaces), applying a fresh coat on a surface not yet thoroughly dry or 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 allowing it to dry. When the paint has dried, sand to a fresh surface and recoat.

Blisters form during application:

This is caused by application onto a hot surface or by moving the finished piece into direct sunlight right after application.

Blisters form after application:

This is generally caused by the expansion of moisture or entrapped solvent under the finish.

"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. In all cases remove the paint while still wet. Clean the surface with an appropriate cleaner and degreaser. Sand thoroughly. Recoat.

Pulling during application: There is sometimes a pull as the paint is being applied when insufficient material is being carried in the brush or when the paint is too thick for ambient conditions. This is usually overcome by carrying more material in the brush or by further thinning of the paint.

CHAPTER SIX



Q&A

15 Pages

EPIFANES[®]



Question:

What is the best way to remove old finish?

Answer:



There is no right way or wrong way to strip varnish. Whatever works for you, is the best way. Our recommendations are based on our own experiences and preferences.

First, begin with a good (6 or more. You can't have too many) selection of scrapers. Go nuts, experiment with a variety of styles, brands, and shapes. These should be treated as tools. That is what they are. Learn how to sharpen them. We cannot emphasize enough the value of a sharp scraper. Books should be written on this subject. If you want to know more, ask us.

Next, experiment with stripping methods. There are a vast number of chemicals out there to choose from. We do not use chemicals. We have tried most of them and have always returned to a heat (hot air) gun and sharp scrapers. This method is by far the least messy and most effective for us. However, having said this, try different methods. You may discover a combination that works better for you. That is o.k. On the subject of heat guns, we have tried them all from the most expensive at \$140.00 to a \$25.00 Black & Decker. We use the Black & Decker exclusively. Why? It is a fraction of the weight and produces the same thing. Hot air!

Once you have determined the method that works best for you and your boat, get organized. Establish a sharpening area, lay out your tools, clean your space, put on your favorite music and begin. Start at one end and work your way to the other. This sounds basic but avoid the tendency to jump from here to there. You will have better success if you approach the job logically and orderly.

You may find that stripping is a two-stage process. Strip off the bulk of the varnish first time around then, hit it a second time removing the residue and bringing the wood back to fresh. This is o.k. too. Scrapers remove more material easier and faster than sandpaper. Stay with them until the job is done. If you find that your scrapers do not work on a particularly tight spot, make one that does. With an old file and a grinder, one can make an excellent specialized scraper.

Deck seams. The old caulk, and it may be very old, very hard putty, needs to be removed. Do not try to save this. You will not be able to and still retain the integrity between the caulking and the seam edges. Again, a heat gun works best. Make a gouging tool that fits your seam width. Take your time and be careful! Do not lie awake

at night devising a "router/circular saw seam removal machine". We have not seen one that works yet.

Take your time and enjoy yourself! This is fun remember?

Question:

What is the best way to care for a good Varnish brush?

Answer:

Although the tendency to use a foam brush for the ultimate in convenience may be great, there is absolutely nothing as satisfying as a good quality, natural bristle varnish brush. When selecting a brush watch for the following:

- A true varnish brush will have slightly shorter bristles in order to "bite" into a heavier product like marine varnish. This makes for a slightly stiffer bristle.
- Check the bristle ends. A good brush will have split ends (just like a split hair).
- Watch for the way the bristles have been cut or chiseled. This will determine how well the brush will smooth the varnish as well as how well it will draw the air from the finish.
- It is difficult to determine how the bristles have been set. Epoxy is normal, vulcanized rubber is great.
- Ensure that the ferule (metal part) is well put together. Hopefully, the material used is stainless.
- If the brush has passed the test so far, chances are the handle is hardwood. At the very least, the quality of the handle will be a good indicator as to the standard used in constructing the rest of the brush.

New brushes are very dirty! Take some time to break in a new brush. Use it and clean it out several times with mineral spirits. Keep in mind it may take many sessions to really get it clean. We have brushes that are reserved for final coat only. We still spend up to an hour cleaning a brush prior to a final coat. Sit in front of the TV and flick the bristles back and forth. In front of a bright light, you will be amazed at what will come out of it.

The best way to store a good brush is to keep it wet, suspended in diesel fuel or kerosene. Yes, diesel. Nothing works better as far as we are concerned. Diesel is oily enough to keep the bristles nice and soft while still having enough cutting capability to keep the brush clean. We have a brush that is easily sixteen years old. Prior to varnishing, clean the diesel from the brush with mineral spirits, rinsing and spinning several times. Once done repeat the process. Your brush will be as happy as can be in a diesel or kerosene bath. Change the diesel once or twice a year.

Question:

Why do varnish manufacturers recommend thinning?

Answer:

Proper thinning of the varnish is very important. If you apply the first coat of varnish full strength, the entire varnish system will adhere to a coat that is sitting on top of the wood. Not good. Therefore, significant thinning (50% or 1/2 & 1/2) of the first coat is very important. A very thin "sealer" coat will give maximum penetration and good grip for the subsequent system. It is quite normal for a manufacturer to recommend a thinning of the first few coats progressively building to full strength.

Applying varnish over stained wood can cause particular adhesion problems. If filler stain has been used, the aggregate in the stain can block the penetration of even very thin varnish. In some cases, it is advisable to rub in the first coat of thinned varnish as you would stain to ensure that the material penetrates properly.

Once the sealer coats have been applied, varnish should be used full strength. If the varnish is not flowing well or it feels "brushy" possibly due to weather conditions, small amounts (usually 5% or so) of thinner can be added to make it a bit more user friendly.

Check with the manufacturer of whatever varnish you happen to be using. There are great additives available to help you through tougher conditions. Make sure that you follow the manufacturers instructions carefully. Concocting your own blend can lead to greater problems down the road. As an example, adding too much accelerator or "Jap dryer" can create a harder, less flexible finish. This can greatly reduce the overall life of your finish.

Question:

I am experiencing air bubbles drying in my varnish.

Answer:

We will bet that what you are experiencing is dust. Dust and/or lint particles that dry in the varnish can form tiny craters that can certainly look like air bubbles. It is very rare for air to dry in a coat of varnish. Let's try to figure out where this dust might be coming from. If the coat looks great upon completion but several hours' later looks as if someone has taken a saltshaker to your boat, then the dust problem is most likely airborne. If the dust occurs right away, brushes and the initial cleanliness of the surface are more likely to be the culprits.

Here are a few, sometimes overlooked, sources of dust;

- Although your brush may appear clean, try flicking the bristles in front of a bright lamp. You will be amazed at what comes out of it. Turn on the TV and be patient. It can take an hour. Do not assume that a new brush is clean, new brushes are particularly dusty.

- Be aware of what is happening overhead, it may be that your basement ceiling is shedding dust each time someone crosses the room upstairs.
- Fluorescent lights will act as a dust magnet until the moment you turn them off.
- Check your clothing. Wear dampened Tyvek coveralls.
- Mask or temporarily seal all screw holes. Your brush will certainly pull out whatever is hiding in those holes.

We know a painter that varnishes in the nude listening to Vivaldi. Hey, whatever works.

Question:

I recently purchased a 15' pre-war Century Utility that has been out of the water for at least two years. After stripping and sanding the hull, the stain and two sealer coats have been applied. What danger, if any, is there of the varnish cracking once the boat is re-hydrated? How many coats of varnish would you suggest that I apply? Also, is the quality of varnish I use a factor?

Answer:

It sounds like you are doing everything right so far. Assuming that you are using better quality varnish (more flexibility) there really is no danger of the finish "cracking" once back in the water. However, what will happen if you apply the entire system now is that the varnish will be squeezed from between the planks as they swell forming a hard ridge. There is nothing wrong with this from an integrity point of view, however it is unsightly. Resolve the problem using the following procedure: In order to protect the boat from shop wear, insure that several sealer coats have been applied. Slowly increase the moisture content of the wood back to normal. This can be accomplished by draping the boat in plastic and running a couple of vaporizers or, lay down a bed of wet sawdust. Here is something else to keep in mind, if the decks are caulked, the seams will become proud if they are laid now rather than after the boat has adjusted to "normal". This can pose a greater problem. Any major change in the expansion or contraction of the decks may result in the seams parting company with the planks causing them to leak. Once the wood has normalized, continue with the varnish system. Seven to ten coats in total should bring the boat to show quality finish.

As mentioned above, the quality of the varnish certainly plays an important factor in any job. Very basically, varnish is oil, resin, solvent and a few additives that help the product dry, and repel U.V. etc. The lesser quality the varnish, the more solvent (cheapest ingredient) there will likely be. The quality and quantity of oils and resins will determine the weather resistance and longevity of the finish. Generally, better quality oils and resins provide a more flexible finish that has the ability to expand and contract with a piece of wood that is constantly on the move. In conclusion, look for varnishes that contain better quality oils like Tung Oil and a higher solids content.

Question:

To what extent if any, does climate play a role in the life expectancy of a boat's finish and/or the life of the boat itself? i.e. the cold northern climate vs. the hot, humid south vs. the dryness of the west. Should boats in different regions have different numbers of varnish coats for additional protection?

Answer:

Climate certainly plays an important role in the life expectancy of a boat's finish. Let's take a fictitious boat and move it around. We'll say an 18 foot mahogany planked runabout, with painted topsides and varnished decks and interior. First scenario will be in the mixed climate of the northeast or northwest. This can sometimes be the hardest climate to deal with, hot in the summer, cold in the winter and everything else in between. Heat and cold, naturally, causes expansion and contraction. Alone, this is not a terrible thing; a good quality varnish or alkyd enamel finish will have the ability to take up that movement. However, introduce moisture and UV and you have more to contend with. If the boat sees consistent exposure over the summer months, even if that means a season of 4 months, expect to apply one to two coats of varnish annually. The painted surfaces will last years before requiring a maintenance coat unless, they are showing signs of normal wear and tear like fender scratches etc. Then it simply becomes an appearance issue. If however, that same boat is kept in a covered boathouse or, trailered and kept in a garage when not being used, expect a coat of varnish every 3-5 years! Exposure to the sun makes all of the difference in most cases. Now, during the winter, if the boat is stored outdoors and covered with a tarp, expect to see damage to either the painted or varnished surfaces. Damage as in lifting or peeling at the joints. This will be caused primarily by moisture, not necessarily the cold. If the same boat is stored in unheated indoor space, there will be little or no deterioration. If we take the same boat and move it south, take the moisture out of the scenario and add mega doses of UV. Once again, if exposed to the sun all summer long; expect 2-4 coats of varnish annually. Covered, maybe 1-2 coats every couple of years. Winter is not as big an issue because it is a moderate extension of the summer. Imagine the varnish is hand cream, every once in a while, depending on the sun and exposure, your surfaces need to be replenished and moisturized. Fresh coats of varnish accomplish the same thing. Generally, a varnish system should be 7-8 coats. If in the south, or exposed to lots of UV, step that up by two coats. In conclusion, protection from direct exposure to ultra violet and excessive moisture will ensure best success.

Question:

Could you explain the differences between varnishes that require sanding between coats and those that don't require sanding? Is there a difference in life expectancy between the two? Also, what is the effective shelf life of varnish? Does storage temperature play a roll?

Answer:

There are many, many varnishes; clear finishes and hybrid clear coatings on the market today. Most manufacturers have made some attempt in various directions in order to

create an easier, faster, longer lasting finish. Unfortunately, we can only comment in any detail on our own products. For obvious reasons, it would be unfair to do otherwise.

Twelve years ago, Epifanes produced a finish very similar to our Clear High Gloss Varnish, called Wood Finish Gloss. It is a tung oil, alkyd resin based finish just like our varnish however, it does contain ingredients not normally found in traditional varnishes producing one significant difference. Wood Finish does not require sanding between coats provided the next coat is applied within a 72-hour period. This feature has an obvious effect on the amount of labor and time required to build a finish from bare wood. Sanding is optional. Wood Finish changes the focus of sanding completely. You are no longer sanding for adhesion but appearance only. Are you sacrificing any integrity by using this product? At this point in time no. However, having said that, we are recommending top coating this product with our varnish for the ultimate in performance. We have 97 years experience with our Clear High Gloss Varnish and only twelve years with the Woodfinish. Time will tell.

Unopened varnish has virtually no shelf life. We have opened five-year-old varnish that has been perfectly good. The oils and resins may change color and consistency slightly but essentially the product should be fine. Once opened however, the life of the varnish will be greatly reduced. Each time it is opened, a portion of the solvent evaporates leaving a thicker mixture more prone to solidifying. Store the container upside down, reduce the air space, and keep the varnish cool. I have more problems keeping varnish in Florida than Maine. The temperature plays a major roll. Store in a cool area of the basement.

Question:

I am having trouble getting successive coats of varnish to smooth out on my boat. What level or grit of sandpaper should I use in between each coat and how hard or how much should I sand the previous coat in order for the next coat to lay up smoothly?

Answer:

The purpose of sanding is to create a mechanical bond, or “tooth”, between two layers of finish. In addition, sanding also flattens the surface creating a smoother surface and improving the appearance of the subsequent coat. Please keep in mind that the purpose of varnish or any other coating is to protect a piece of wood. Don’t lose sight of this. Over sanding for the sake of appearance may result in a thin finish with little or no protection.

Mil thickness is everything in a varnish system. Let’s start at the beginning. Bare wood should normally be prepared to approximately 100 or 120 grit. Anything much finer than this will not create adequate adhesion for that ever so important first coat. Dry paper of about 220 grit should come next to help knock off the raised grain after the first few coats. Once the grain fills and closes, switch to 320 wet or dry. 320 will offer enough adhesion without taking off too much varnish. Stick with 320 right through until the end. If you are using a heavy body varnish, 320 sanding scratches should not show through. Switching to 400 somewhere prior to your final coat is a good idea but, not essential. Anything finer than 400 grit will not offer enough adhesion. Thorough sanding is important.

In answer to your question, if you are looking for a “show quality” finish, it is essential that the finish is “dead flat”. This can only be accomplished with serious block sanding. In most cases, this style of sanding will remove more varnish than is necessary but does produce the “mirror finish that goes on forever” look. Just be aware of this. Chances are that your edges and possibly, the whole system will be thin. It takes extra care and usually extra coats to produce this type of finish.

Our best suggestion is to work towards something in between a “show quality” and a “utility finish”. This will produce a better than acceptable finish that will have lots of staying power. We would rather see a not so smooth finish with occasional sags than a too thin finish that has been sanded to death.

Question:

My 1956 17' Chris-Craft Sportsman rubbed up against the dock during some rough weather and the varnish has been badly scratched in a couple of isolated places. The scratches didn't damage the stain or gouge the wood. Is there a way to patch or “feather” the damaged sections or do I need to revarnish the whole side?

Answer:

To answer your question, we will assume that a single-part varnish or something similar was used on the boat. Two-part finishes due to their nature, are quite difficult to repair. Most boats similar to yours are finished with one-part so, hopefully we are making a safe assumption.

It is good that the stain has not been affected. Touching up stain is possible but it is more difficult to match the color. Any varnish exposed to UV will change color. Therefore expect a little color difference when touching up the varnish. Once the new repaired area is exposed to the sun, it will eventually blend in on its own. Essentially, the damaged area needs to be lightly roughed up and built back up again with varnish. Be careful at this stage, as you are likely very close to the stain. Sanding through the stain will only create more problems. Start with a thin coat and slowly build back up again to a level consistent with the rest of the finish. Once achieved and if realistic, sand the whole area and apply a fresh coat to all.

If the edges of the damaged area are nice and clean, it is best to fill the affected area with varnish using a very small brush and being very careful with the paper. If however, the damaged area is uneven and jagged, consider the following: Free handing the area with a brush will only produce a “repaired” looking patch. We mask an area larger than the damaged spot with a pattern that suits the patch i.e. a diamond, triangular or rectangular shape. This will give you a nice section to work within and will produce a patch with clean, crisp lines. This is much more professional looking. As well, there is no chance of any loss of integrity where the damage meets the existing area.

It is good practice to keep a small bottle, similar to a nail polish bottle with the brush built into the cap, on board and filled with varnish for emergency repairs where bare wood may be exposed.

Question:

Can you explain the differences in terms of durability, longevity & appearance between one-part and two-part varnishes?

Answer:

It all depends on the application. One should always match the product and its characteristics to the job.

First off, let's compare the basic make-up between the two. Single-part products are generally more traditional in their formulation. They contain natural oils like Tung or Linseed balanced with alkyd and/or Phenolic resins as an example. These products rely on exposure to the air to dry. Two-parts however, are more synthetic (polyesters for example) and rely on the second part or, the "catalyst" to chemically cure the product. Each produces a very different type of coating.

Let's take appearance. If they are quality products, there will be little or no difference between a high gloss one-part and a high gloss two-part clear finish. The degree of gloss will be comparable. However, having said that, generally a two-part synthetic finish will be water clear where as a more traditional one-part will have more of an amber tone to it due to the natural oils. This difference may give you a slight edge when varnishing very light woods like ash or oak if retaining the lightness is an issue. Beyond that, there will be no discernable difference.

One-parts are generally softer and more flexible compared with a harder, more scratch resistant two-part. On an exterior piece of wood that is constantly expanding and contracting with the weather, a softer more flexible finish is desirable whereas, on an interior cabin sole or saloon table where scratch resistance would be a real plus, the harder two-part would be a better choice. The flexibility in an exterior finish is extremely important for longevity. Once a finish loses its flexibility and becomes brittle, that is when the film begins to break down. Two-parts are certainly used on exterior applications as well however. They certainly give relief over short-term maintenance (hard finish etc.) but we do believe that single-part finishes will outlast them over the long haul, as in 10 plus years. That is when you really see the difference. In addition, two-parts are more difficult to repair and remove than one-parts.

There are also single part finishes that are formulated to be to harder than normal. These contain urethane (harder) resins but still rely on air dry. They can be a great compromise and suitable for many applications where a two-part is too difficult or unrealistic to use.

In conclusion, there is very little difference in the appearance between the two. Two-parts being a harder finish, will hold up better and longer on high wear areas but, may not last as long as a one-part in other areas like exterior wood. Single-parts have the ability to offer a compromise in a finish that is harder than some single-parts, but not as hard as a two-part.

People are experimenting all of the time. We regularly hear of two-parts being applied over a build-up of single-part or vice versa. These combinations may or may not work

any better (or worse) than a specified system. As we have often said in the past; “whatever works”.

Question:

Is there any advantage to warming or heating varnish prior to its application or does it depend on how it is applied i.e. brushing, spraying, rolling etc. Also, if using a brush, how much varnish should be put on it before applying it to the surface.?

Answer:

We have about the same number of calls from finishers that chill their varnish prior to use and those that warm the varnish prior to use. Both claim that the varnish works better. Go figure. When varnish is heated, it thins out. Generally, a warmer, thinner varnish will flow out better, particularly in a colder temperature. However, keep in mind that the solvent evaporates as the varnish is heated, therefore it may accelerate the drying time to the point of working against you. There is a danger in applying too thick a coat. This could result in wrinkling. This is less likely in a spray application where the coats are normally thinner. Solvent is added so that you can brush it comfortably. Take that away and it may be harder to brush. On the other hand, cooling the varnish may stiffen it to the point of not flowing out well enough but it may give you an edge in hotter climates. We are firm believers in “whatever works”.

Everyone has heard how varnish should be “laid on” and not brushed. There is much truth to this. The more that you wave a brush full of varnish around, the more solvent is evaporated and the stiffer the product will become. Varnish is most successful if applied then ignored. Just let the varnish do its thing. As for quantity, on horizontal surfaces, don’t be shy. You can be quite generous without applying too much. Keep the brush wet and reload when it starts to drag. On vertical surfaces there is a fine line between just right and too much. Practice until you get it right.

One last point to ponder. Each manufacturer creates a formulation that is just right for whatever they are trying to achieve. Varnishing is 95% technique. Changing the formulation beyond the manufacturers specs. will only weaken the finish ultimately. Spend more time on technique and less on additives, heating or chilling.

Question:

Could you explain under what conditions a varnish accelerator additive should be used and, alternately, when a retarder additive is appropriate?

Answer:

Firstly, care should be taken when adding any kind of solvent or additive to any product. Varnishes are made to strict formulations, and for a reason. Doctoring up a product to suit ones self may in fact be “weakening” or producing a lesser quality finish. Stick to the guidelines and use products that are manufactured specifically for that product.

At Epifanes, we only make four additives for our single-part products. We make a high quality, very pure mineral spirit for brush thinning, and a “hotter” solvent more suitable for spray applications. In addition, we make a varnish accelerator and a varnish flow enhancer. Both of these products are used very sparingly. Generally, 2% is all that is necessary. Going beyond these percentages, may alter the formulation enough that they will reduce the overall strength (which translates to longevity) of the product. As an example, “accelerators” used in excess, will produce a harder, less flexible finish. This reduces the overall length that the finish will last as exterior finishes rely on flexibility to survive.

Having said all this, accelerators or retarders can give you an edge, which could make life a little easier in your particular situation. An accelerator is generally used in colder climates where a slightly faster dry time and a little more flow are desirable. The problem when varnishing in cool conditions is that it takes such a long time for the varnish to dry there is a greater danger of moisture entering the finish before it has a chance to dry. In addition, varnish stiffens in cooler temperature. Accelerators will help.

On the other hand, varnishing in hotter climates can be a problem. The solvents in paint or varnish evaporate so quickly, the product sets up before it has a chance to flow out. Our Easy-flow gives the varnish a “silky” more “creamier” feel. It can make varnishing a real pleasure in conditions less than best.

Question:

I am restoring a 1950's vintage Wavemaker Wolverine with mahogany decks. Should I thin the first few coats of varnish before I apply them? If yes, what percentage of thinner should I use for each coat?

Answer:

The first few coats of any varnish system are extremely important. The adhesion between subsequent coats will only be as good as the bond between the wood and the first coats. Epifanes Varnishes are loaded with solids. This means that thinning the first few coats is that much more important. Extreme thinning at the beginning maximizes the penetration into the wood and obviously, encourages good adhesion.. We generally recommend thinning the first coat 50% (half & half), the second coat 25% and the third coat 15%. This scenario becomes even more important if the wood has been stained. The aggregate used in a filler stain can sometimes prevent the first coat of varnish from penetrating the wood surface. The first thinned coat or, sealer coat, should be forced or worked into the surface with a good brush or clean cloth.

Question:

I've heard about a varnish that doesn't need to be sanded in between coats if successive coats are applied within a certain time. The question is, how would you correct 'mistakes' i.e. drools, sags, etc. before applying the next coat or is it a product primarily for pros only?

Answer:

You may be referring to one of our own vanishes, Woodfinish Gloss. It is the only one that we are aware of with these characteristics. Basically, the Woodfinish Gloss can be recoated without sanding provided the next coat is applied within a 72 hour period. Once you go beyond that 3-day window, you must sand as you would conventional varnish. Now firstly, the real advantage is the savings in time and labor. Secondly, because you are not sanding between coats, the build-up is much greater and much quicker. Woodfinish changes the focus from sanding for adhesion to sanding for appearance. This leads us to your concern regarding sags and runs etc. Runs make us happy. At least we know the varnisher is getting good mil thickness. We would rather see runs than holidays. Unless the sags are excessive, most imperfections can be dealt with prior to the last couple of coats. If extreme, deal with them individually at the time. Either way, remember you are only sanding for appearance therefore, you only have to sand the areas that really count.

Woodfinish Gloss is designed for anyone to use. It is an easier, quicker product for the individual boat owner to use without sacrificing any integrity. The quality of the finish is exceptional. For the professional, the savings in labor, and what that translates too is exceptional.

Question:

I would like to know still more about your WoodFinish product. It is fascinating that the majority of the sanding process can be eliminated. Please explain the differences in properties between the WoodFinish and regular Epifanes varnish in terms of flowing capabilities, setup times, etc. Also, please explain what a 'holiday' is as it applies to varnishing.

Answer:

Our Epifanes Woodfinish Gloss is indeed a great product. Although the make-up of the Woodfinish is essentially the same as our High Gloss Varnish, we hesitate to call it a varnish. The Woodfinish contains ingredients not normally found in a true varnish. The film remains microscopically porous for a period of time enabling good adhesion during that 72 hour "window". Varnishing beyond the window necessitates sanding as usual. Sanding is optional at any time of course and at some point during the process you may choose to sand anyway. Keep in mind that the focus of sanding has been changed from sanding for adhesion, to sanding for appearance. This makes for a huge difference in labor savings. Woodfinish is particularly good during build-ups over stained mahogany. It enables you to build up without the danger of sanding through the stain.

The differences between the two really stop there. we can barely notice any difference in the application characteristics. The gloss, flowing characteristics, dry time etc. is so very close as to be indiscernible. Sometimes, I feel that the varnish has a little more sparkle than the Woodfinish but, again, they are too close to be certain.

Holidays are simply "missed" or "dry" spots.

Question :

For sanding purposes, what is the effective drying or “cure” time in between coats of varnish or does it vary depending on the relative temperature?

Answer:

Manufacturers publish a theoretical “dry time” based on a predetermined temperature and humidity level. Certainly, if the conditions are beyond these levels in either direction, the dry time will be effective. Generally speaking, a single-part paint or varnish is safe to sand after 24 hours. This will ensure that the finish is hard enough to withstand the abuse of a good sanding. This does not necessarily mean that the material will be easy to sand or, that the sandpaper will not clog. Better quality varnishes will contain more oil and therefore, will simply take longer to really cure.

Question:

For the last two or three coats of varnish, how 'fine' should the sandpaper be and would you suggest that the last coat be thinned or not?

Answer:

400 grit wet or dry is the absolute finest grit that we would ever recommend. In fact, I usually lean towards 320 grit. Anything finer than 400 grit does not create enough “tooth” or mechanical bond to ensure adhesion.

Thinning the final coat is the applicators decision entirely. If you have been building with full strength (my preference) and the varnish has been laying down o.k. then by all means continue with full strength. If however, you are having problems keeping a wet edge or, it is just not behaving, then consider a splash or two of brushing thinner. Only a large dose of thinner (15% or more) will affect the ultimate strength and quality of the finish.

Question:

I have read in a number of places over the years about a varnished finish that is either hand-rubbed or has a hand-rubbed effect or look to it. Could you explain what that means? Is it a special procedure and, if so, how is it accomplished?

Answer:

In the old days, the only way to obtain anything except a high gloss finish in a varnish was to “rub it by hand”. Obviously, it was a labor intensive, time-consuming procedure. These days, we can reproduce that look in a single (or two-part) part finish right out of the can. “Rubbed Effect” varnish describes the degree of gloss. Somewhere between a semi gloss, satin or eggshell finish. This degree of gloss is perfect for an interior although it is sometimes used in exterior applications. Rubbed Effect Finishes are

generally quick to dry, and easier to maintain. Our Rubbed Effect Varnish contains urethane resins which produce a harder , more scratch resistant finish.

We recommend building up from bare wood with a gloss finish and topcoating with the Rubbed Effect, simply for the effect. This accomplishes two things. Gloss finishes are more weather resistant and offer better protection against UV and weather. Building up with 3-4 coats of this before the Rubbed Effect will maximize protection. Secondly, the build-up of gloss gives the overall appearance of the finish more depth and clarity.

Epifanes does manufacture a version of Rubbed Effect called Woodfinish Matte. This is one of the only "Rubbed Effect" finishes containing U.V. filters. This addition makes it very suitable for exterior use. It is often used on the inside of Canoes and Kayaks where a non-glare finish is desired.

Question:

Earlier, you made a comment that you personally prefer to build successive coats on a boat using unthinned or full strength varnish. This seems to "fly in the face" of what we have heard for years about the necessity of 'ramping up' coats using decreasing percentages of thinned varnish. I like the sound of using unthinned builder coats but, what accounts for the difference in methods?

Answer:

As you know, mil thickness is everything in a Clear Finish. However, in order to ensure adhesion, it is very important to apply the first several coats thinned. In most cases, we recommend thinning the first coat ½ and ½ or 50%. This results in maximum adhesion giving subsequent coats something to really "hang" on to. The second coat should be thinned 25% and the third, 15%. Once these sealer coats have been applied, it is time to really pour on the varnish and concentrate on building some mil thickness. This can be accomplished full strength or, thinned up to 5% if you are having a tough time due to weather or conditions.

Question:

For those of us who are not professionals and only varnish occasionally, can you elaborate on the various acceptable methods of cleaning and storing brushes in between uses? Also, what is the qualitative difference between Badger hairbrushes and Chinese Bristle brushes?

Answer:

When it comes to cleaning and storing brushes, we are stuck on one method that works very well for us. We have tried many methods, none with any degree of success, especially over the long term. Most methods of course, work great over the short period but, it' months or years later that really tells the tale in our opinion. This is how we recommend cleaning and storing a natural bristle brush: First, find yourself a container that is impervious to solvents (polyethylene works good). Epifanes manufactures a

Brushkeeper specifically for this purpose. The container should be tall enough for your biggest brush and wide enough for your collection. Devise a rack system (ie. coat hanger) that will hang your brushes suspended just clear of the bottom. Fill the container with Diesel (yes, Diesel) or Kerosene until the ferule (the metal part) is halfway submerged. This will ensure that the bristles are "underwater". This is where they will live. When it comes time to use the brush, simply rinse out the diesel two or three times with common mineral spirit, spin and use. After use, repeat with two or three rinsings, a spin and back in the diesel. This method will keep your brushes clean and supple for years. we have 15-year-old brushes that are in great shape. The diesel has enough cutting capability to keep the varnish from clogging up the bristles but, is oily enough to keep the bristles soft.

Most brushes these days are Natural or Chinese bristle. Occasionally you will come across a Badger Bristle brush. Have a close look however, as some of the "Badger" bristle brushes are Chinese bristle that have been bleached with the "stripe" to look like Badger. These are called "Badger Style". Read the fine print. Chinese bristle is a stiffer and longer lasting bristle and our choice for high solid paints and varnishes. They will outlast a Badger bristle by years. Beyond this, it comes down to personal preference.

Question:

I just purchased a 1956, 16' Century Resorter. How can I tell if it needs to be refinished or, just have fresh coats of varnish applied?

Answer:

There are several things to consider when analyzing the condition of an existing finish. If you have just purchased a boat, hopefully at a great price, chances are that it is due for a complete refinish. However, having said that, you might be lucky and have found a boat that has intact varnish and only needs freshening up.

First, visually examine all of the varnish. Look for discoloration, lifting, peeling or cracking. If this is the case in any area, **strip it!** If the problem is isolated, at the very least, strip that section. Any deterioration like this means that the varnish has "parted company" with the wood. When this occurs, it doesn't matter how much fresh varnish is applied, the finish is not and will not adhere to the wood. Pay attention to the decks where the seams may be caulked. If these seams show any cracking, this can lead to water damage below decks and will need to be stripped and recaulked.

If the finish appears intact but "tired", it may be worth hanging on to the varnish for a few more years or more. There is certainly value in an older finish especially, if it is original. Wood and varnish changes color with age. The patina that develops with time is impossible to duplicate. If the finish appears good but you are still having doubts, generously dampen a rag with mineral spirits and wipe the surface. This will simulate (for a few seconds) what the finish will look like with a fresh coat. If you like what you see, then you can likely get away with a few fresh maintenance coats.

Whether the finish needs to be replaced or not, now is the time to remove hardware. Carefully identify each piece as it's removed using tape Select a type that will not be

difficult to remove at a later date, and label using a system that you will understand. Keep in mind that you may not be replacing hardware until the following season so mark it well. You might be amazed at how foreign a piece of hardware may look come Spring. Also, tape the screws to the piece of hardware.

Now you can really stand back and have a good look. This is an exciting stage. Enjoy every aspect of it.

CHAPTER SEVEN



U.S.A. PRICELIST

4 Pages



www.epifanes.com

EPIFANES NORTH AMERICA INC.

Suggested List Price Effective Jan. 2003

sales@epifanes.com

VARNISHES AND CLEAR FINISHES

EPIFANES CLEAR VARNISH

World famous, highest quality marine spar varnish. Manufactured with tung oil, U.V. filters, phenol and alkyd resins for superior protection.

Code	Description	Size	\$
CV.250	-	250 ml	11.00
CV.500	-	500 ml	17.00
CV.1000	-	1000 ml	31.50
CV.5000	-	5000 ml	151.75

EPIFANES RUBBED EFFECT VARNISH

Gives a rich hand-rubbed look for beautiful interior protection. Best over build-up of high gloss.

Code	Description	Size	\$
RE.500	-	500 ml	19.10
RE.1000	-	1000 ml	35.30

EPIFANES WOOD FINISH GLOSS

High build, hard varnish-like finish without sanding between coats. High gloss beauty with outstanding U.V. protection for teak and other fine hardwoods.

Code	Description	Size	\$
WFG.500	-	500 ml	18.50
WFG.1000	-	1000 ml	34.00

EPIFANES WOOD FINISH MATTE

A finish coat over Wood Finish Gloss. Beautiful, satin sheen with U.V. protection for interior or exterior use.

Code	Description	Size	\$
WFM.500	-	500 ml	23.95
WFM.1000	-	1000 ml	42.70

EPIFANES POLYURETHANE CLEAR

Extraordinary hardness and a deep, clear gloss with built-in U.V. protection for extended freedom from maintenance. Package includes base & reactor. Thinning with Polyurethane Thinner For Brush or Polyurethane Thinner For Spray is required for application.

Code	Description	Size	\$
PUCG.750	-	750 gr	55.20

EPIFANES POLYURETHANE CLEAR SATIN

Produces the extra hardness and durability of a two-part aliphatic urethane based formulation with a subtle satin finish. For all interior wood. Excellent for use on cabin soles or salon tables. Package includes base & reactor. Thinning with Polyurethane Thinner For Brush or Polyurethane Thinner For Spray is required for application.

Code	Description	Size	\$
PUCS.750	-	750 gr	55.20

EPIFANES RAPIDCOAT AND RAPIDCLEAR

A lightly pigmented (or clear), UV protecting, satin finish for all woods. Great breathing properties, good flexibility, will not peel or lift. Application every 5-6 hours. Minimum three coats. No sanding required. Easy touch up and maintenance.

Code	Description	Size	\$
RC.750	Natural Wood	750 ml	32.00
RCC.750	Clear	750 ml	32.00

EPIFANES PP VARNISH EXTRA

Fast drying, high build, high gloss two-component varnish. Three coats per day under normal drying conditions! Excellent impact and abrasion resistance. For exterior use, must be top-coated with EPIFANES Clear Gloss Varnish or Polyurethane Clear.

Code	Description	Size	\$
PPX.2000	-	2000 ml	125.00

POLYURETHANE TOPSIDE FINISHES

EPIFANES POLYURETHANE COATINGS

Two-part polyester saturated, aliphatic urethane coating formulated for maximum resin depth and hardness with a long lasting mirror-like gloss. For brush, roller or spray application. Package includes base & reactor. Thinning with Polyurethane Thinner For Brush or Polyurethane Thinner For Spray is required for application.

Code	Description	Size	\$
PU800.750	#800 White	750 gr	54.30
PU801.750	#801 Black	750 gr	54.30
PU802.750	#802 Orange	750 gr	54.30
PU803.750	#803 Cream	750 gr	54.30
PU804.750	#804 Light Oyster	750 gr	54.30
PU805.750	#805 Alpine White	750 gr	54.30
PU806.750	#806 Ice Blue	750 gr	54.30
PU811.750	#811 Gray Mist	750 gr	54.30
PU817.750	#817 Yellow	750 gr	54.30
PU821.750	#821 Gray	750 gr	54.30
PU825.750	#825 Dark Brown	750 gr	54.30
PU829.750	#829 Sand	750 gr	54.30
PU831.750	#831 Gray Tone	750 gr	54.30
PU839.750	#839 Off White	750 gr	54.30
PU845.750	#845 Red	750 gr	54.30
PU852.750	#852 Bold Blue	750 gr	54.30
PU853.750	#853 Capri Blue	750 gr	54.30
PU854.750	#854 Dark Blue	750 gr	54.30
PU856.750	#856 Deep Red	750 gr	54.30
PU859.750	#859 Green	750 gr	54.30
PU875.750	#875 Black Green	750 gr	54.30
PU879.750	#879 Dark Green	750 gr	54.30

SINGLE-COMPONENT TOPSIDE FINISHES

EPIFANES YACHT ENAMEL

The mirror-like gloss, color retention and intensity of this enamel surpasses the traditional. Its longevity, surface hardness and flexibility prove it is the ultimate enamel finish for wood, fiberglass, steel and aluminum.

Code	Description	Size	\$
YEUV.750	Ultra White	750 ml	28.70
YEUV.2000	Ultra White	2000 ml	75.85
YEUV.4000	Ultra White	4000 ml	148.05
YEW.750	White	750 ml	28.70
YE001.750	#1 Cream	750 ml	28.70
YE002.750	#2 Beige	750 ml	28.70
YE003.750	#3 Wheat	750 ml	28.70
YE004.750	#4 Buff	750 ml	28.70
YE006.750	#6 Tropic Green	750 ml	28.70
YE007.750	#7 Bright Blue	750 ml	28.70

Code	Description	Size	\$
YE008.750	#8 Dark Blue	750 ml	28.70
YE009.750	#9 Sea Green	750 ml	28.70
YE011.750	#11 Dado Brown	750 ml	28.70
YE012.750	#12 Dark Brown	750 ml	28.70
YE013.750	#13 Black Brown	750 ml	28.70
YE014.750	#14 Mahogany	750 ml	28.70
YE016.750	#16-N Bright Red	750 ml	28.70
YE018.750	#18 Light Gray	750 ml	28.70
YE019.750	#19 Black	750 ml	28.70
YE021.750	#21 Orange	750 ml	28.70
YE023.750	#23 Deep Red	750 ml	28.70
YE024.750	#24 Light Oyster	750 ml	28.70
YE025.750	#25 Alpine White	750 ml	28.70
YE027.750	#27 Gray Mist	750 ml	28.70
YE028.750	#28 Water Blue	750 ml	28.70
YE029.750	#29 Ocean Blue	750 ml	28.70
YE030.750	#30-N Teal Green	750 ml	28.70
YE031.750	#31 Turkish Blue	750 ml	28.70
YE033.750	#33 Light Brown	750 ml	28.70
YE034.750	#34 Chocolate Brown	750 ml	28.70
YE035.750	#35 Red Brown	750 ml	28.70
YE037.750	#37 Yellow	750 ml	28.70
YE040.750	#40 Off White	750 ml	28.70
YE048.750	#48 Light Green	750 ml	28.70
YE062.750	#62 Atlantic Green	750 ml	28.70
YE065.750	#65 Deep Green	750 ml	28.70
YE072.750	#72 Dark Green	750 ml	28.70
YE205.750	#205 Deep Blue	750 ml	28.70
YE206.750	#206 Blue Gray	750 ml	28.70
YE210.750	#210 Antique Ivory	750 ml	28.70
YE212.750	#212 Gray	750 ml	28.70
YE213.750	#213 French Gray	750 ml	28.70
YE214.750	#214 Dark Gray	750 ml	28.70
YE215.750	#215 Sky Blue	750 ml	28.70
YE216.750	#216 Pearl Gray	750 ml	28.70
YE217.750	#217 Light Blue	750 ml	28.70
YE218.750	#218 Jade Green	750 ml	28.70
YEA.750	Aluminum	750 ml	28.70

EPIFANES MONOURETHANE COATINGS

Years of testing and on-vessel experience have proven this unique finish to be the most advanced, highly engineered single-part formulation, based on urethane-alkyd resins, available. It gives incredibly hard urethane abrasion and chemical resistance with outstanding gloss, durability, color retention and U.V. protection.

Code	Description	Size	\$
MUW.750	White	750 ml	35.35
MU3101.750	#3101 Cream	750 ml	35.35
MU3107.750	#3107 Bright Blue	750 ml	35.35
MU3108.750	#3108 Dark Blue	750 ml	35.35
MU3112.750	#3112 Dark Brown	750 ml	35.35
MU3116.750	#3116 Bright Red	750 ml	35.35
MU3117.750	#3117 Bold Yellow	750 ml	35.35
MU3119.750	#3119 Black	750 ml	35.35
MU3121.750	#3121 Orange	750 ml	35.35
MU3124.750	#3124 Light Oyster	750 ml	35.35
MU3125.750	#3125 Alpine White	750 ml	35.35
MU3140.750	#3140 Matahorn White	750 ml	35.35
MU3165.750	#3165 Deep Green	750 ml	35.35
MU3172.750	#3172 Dark Green	750 ml	35.35
MU3212.750	#3212 Gray	750 ml	35.35
MU3218.750	#3218 Jade Green	750 ml	35.35

EPIFANES NAUTIFORTE

The finest, most sophisticated resin has been used to produce a paint that is non-yellowing, gives excellent flow, minimal dirt retention and long lasting gloss. A degree of gloss is activated by exposure to U.V.

Code	Description	Size	\$
NFW.750	White	750 ml	35.35
NFW.2000	White	2000 ml	92.50
NF24.750	#24 Light Oyster	750 ml	35.35
NF25.750	#25 Alpine White	750 ml	35.35

SPECIALTY FINISHES

EPIFANES EGGSHELL ENAMEL

Gives luster instead of gloss. Perfect for cabin interiors or any area where a satin effect is desired. Use as a finish coat over EPIFANES Yacht Enamel for the ultimate in subtle elegance.

Code	Description	Size	\$
EEW.750	White	750 ml	36.00
EE1.750	Cream	750 ml	36.00

EPIFANES NON-SKID DECK COATING

Exceptionally strong, urethane-alkyd based, single part deck coating. Pre-mixed with polypropylene beads. Two coats rolled will render a textured surface for long-lasting non-skid protection.

Code	Description	Size	\$
NSW.750	White	750 ml	34.50
NS1.750	#1 Cream	750 ml	34.50
NS212.750	#212 Gray	750 ml	34.50
NS213.750	#213 French Gray	750 ml	34.50

TWO-COMPONENT PRIMER SYSTEMS

EPIFANES EPOXY PRIMER

Two-part primer with excellent adhesion and filling properties. May be used above or below the waterline. Provides a hard, strong base for the application of EPIFANES Polyurethane coatings.

Code	Description	Size	\$
EXPW.750	White	750 ml	42.30
EXPW.2000	White	2000 ml	111.00

EPIFANES INTERIM COAT

A two-part adhesion primer designed to cover bare fiberglass or epoxy systems when top-coating with a one-part or two-part product. For use below the waterline.

Code	Description	Size	\$
ICW.750	White	750 ml	46.60

EPIFANES EPOXY FILLER

Two-part filler for fairing the substrate of fiberglass, steel or aluminum prior to the application of EPIFANES two-part paint systems.

Code	Description	Size	\$
EXFG.750	Gray	750 ml	44.50

SINGLE-COMPONENT PRIMER SYSTEMS

EPIFANES WERDOL WOOD PRIMER

Gives excellent adhesion and filling to bare wood. Sands well.

Code	Description	Size	\$
WPW.750	White	750 ml	18.60
WPW.2000	White	2000 ml	46.10
WPW.4000	White	4000 ml	91.10

EPIFANES WERDOL WOOD PRIMER (cont'd)

Code	Description	Size	\$
WPG.2000	Gray	2000 ml	46.10
WPG.4000	Gray	4000 ml	91.10

EPIFANES FIBERGLASS PRIMER

Provides optimum adhesion to fiberglass or gelcoat surfaces.

Code	Description	Size	\$
FPW.750	White	750 ml	28.10
FPW.2000	White	2000 ml	74.35
FPW.4000	White	4000 ml	146.45

EPIGROND PRIMER

Multi-purpose primer applied over one-part paints or anti-corrosive systems ensures maximum adhesion for one-part finishes.

Code	Description	Size	\$
EPW.750	White	750 ml	26.65
EPW.2000	White	2000 ml	70.50
EPW.4000	White	4000 ml	139.10

EPIFANES FIBERGLASS FILLER

A quick drying two-part filler for use on one and two-part systems or directly on bare fiberglass above the waterline.

Code	Description	Size	\$
FFW.500	White	500 gr	22.90
FFW.1500	White	1500 gr	50.35

THINNERS, ADDITIVES AND CLEANERS**BRUSH THINNER FOR PAINT & VARNISH**

Pure white spirit for thinning all Epi one-part paints and varnishes.

Code	Description	Size	\$
TPVB.500	-	500 ml	9.65
TPVB.1000	-	1000 ml	12.50
TPVB.5000	-	5000 ml	48.60

SPRAY THINNER FOR PAINT & VARNISH

A fast evaporating solvent for spray applications with all one-part paints & varnishes.

Code	Description	Size	\$
TPVS.1000	-	1000 ml	14.35

POLYURETHANE THINNER FOR BRUSH

Brushing Thinner for two-component products.

Code	Description	Size	\$
PUTB.500	-	500 ml	19.10
PUTB.1000	-	1000 ml	29.30

POLYURETHANE THINNER FOR SPRAY

Code	Description	Size	\$
PUTS.1000	-	1000 ml	24.80

POLYURETHANE RETARDER

Extends the wet edge of two-component products.

Code	Description	Size	\$
PUR.250	-	250 ml	32.65

THINNER D-601

Solvent required for brush or spray applications of EPIFANES Epoxy Primer and EPIFANES Interim Coat.

Code	Description	Size	\$
D601.1000	-	1000 ml	26.00

POLYPROPYLENE BEADS

Pre-measured package for adding to 750 gr polyurethane or 750 ml EPIFANES Monourethane.

Code	Description	Size	\$
PPB.20	-	20 gr	6.65

ACCELERATOR FOR PAINT & VARNISH

A special resin based additive which speeds the curing process of EPIFANES one-part paints and varnishes. This will not affect application of the finish. Not to be used with EPIFANES Monourethane or EPIFANES Nautiforte.

Code	Description	Size	\$
APV.500	-	500 ml	20.10
APV.1000	-	1000 ml	33.70

EASYFLOW

Flow enhancer! Epifanes Easy-Flow is based on a selection of natural oils. The formulation produces a versatile, multi-purpose additive or stand alone coating. Epifanes Easy-Flow can be added to all conventional single part and half-synthetic paints and varnishes to improve the flowing capability in any conditions.

Code	Description	Size	\$
EF.1000	-	1000 ml	23.95

BRUSH THINNER FOR PP VARNISH EXTRA

Code	Description	Size	\$
TPPX.1000	-	1000 ml	24.30

EPIFANES FIBERGLASS PREP CLEANER

A cleaning solvent for bare fiberglass and gelcoat.

Code	Description	Size	\$
FPC.1000	-	1000 ml	18.85

BRUSHES AND BRUSHKEEPER

Highest quality, traditional European styled brushes. Hand set and chiseled pure Chinese bristle. Each hair is split to produce optimum softness. Old world quality for those who demand the best working tools.

STYLE-ROUND

A Dutch tradition. Using a turning motion while cutting an edge always gives an even flow of product. The volume of bristle gives great holding capacity. The chiseled shape ensures accurate paint spread.

Code	Description	Size	\$
BR.10	#10 Round	10 mm - 3/8 inch	12.40
BR.14	#14 Round	14 mm - 1/2 inch	17.35
BR.18	#18 Round	18 mm - 3/4 inch	24.40

STYLE-OVAL

This oval shape has the advantages of the round style and is used primarily for varnish application.

Code	Description	Size	\$
BO.35	#35 Oval	35 mm - 1 3/8 inch	20.80
BO.45	#45 Oval	45 mm - 1 3/4 inch	35.50
BO.50	#50 Oval	50 mm - 2 inch	47.95

STYLE-FULL

Elliptical, similar to a flat brush but with rounded edges. Ideal for paint or varnish application.

Code	Description	Size	\$
BF.50	#50 Full	50 mm - 1 1/2 inch	27.95
BF.55	#55 Full	55 mm - 2 inch	34.40
BF.60	#60 Full	60 mm - 2 1/4 inch	39.50
BF.65	#65 Full	65 mm - 2 1/2 inch	45.70
BF.75	#75 Full	75 mm - 3 inch	49.95

EPIFANES BRUSHKEEPER

Translucent polyethylene container measures 5" X 5" X 14" tall and holds four to eight brushes. A tight fitting lid prevents spills and evaporation. Cleverly designed removable rack.

Code	Description	Size	\$
BK.1	-	-	39.50

LATE ADDITIONS

Paint & Varnish Roller Tray

Measuring 11" long by 5 7/8" wide, this polyethylenetray is perfect for any 3-4" roller cover. Made in Germany. This is the best we've found.

Code	Description	Size	\$
PVT	Paint & Varnish Tray	11" X 5 3/4"	3.29

Roller Cover

4" Moltopren Roller Cover imported from Germany, fits our Long & Short Handles. This roller cover is ideal for applying high solids paints and varnishes. Medium density foam, 3/8" nap. Gives the ultimate in control and finish.

Code	Description	Size	\$
RCM	Foam Roller Cover	4 1/4" overall X 1 1/4" dia.	2.99

Roller Handle

Code	Description	Size	\$
RHL	Roller Handle Long	16 1/2"	3.19
RHS	Roller Handle Short	10 1/2"	2.99

STANDARD SHIPPING TERMS

PAYMENT TERMS

Regular customer "Open account" terms are 2% 10/net30. A 1 1/2% per month (18% annual rate) service charge will be added to all overdue accounts.

CONDITIONS OF SALE

We reserve the right to select our customers and the right to refuse any and all orders at any time and to terminate sales or delay shipping to existing customers with an outstanding account balance at time of order and to ship C.O.D. to regular "Open Account" customers with a delinquent payment history or payment discrepancies, with or without notice. Prices, conditions, products and terms are subject to change or withdrawal at any time.

SHIPPING TERMS

All EPIFANES products are priced F.O.B. shipping point. Freight is allowed in full on orders of 75 gallons (284 liters) or more (not including solvents) within the Continental U.S.A. provided payment terms are met according to invoice.

RETURNED GOODS

Merchandise must have approval from Epifanes NA Inc. prior to return. In cases where responsibility for returned goods is entirely ours *and permission is granted for the return*, full credit will be allowed, plus the costs of the returned prepaid freight. When the responsibility of the returned goods is based upon customer error shipping responsibility is the customers and the goods may be

subject to a restocking and handling charge of 15% of original invoice amount. No credit will be granted for shop worn, marked, discontinued or damaged materials. Any materials which have exceeded 12 months age from the invoice date will not be considered for return under any circumstances.

SHORTAGES

Shortages or errors in invoicing must be reported within 10 days of receipt of shipment or invoice, to secure adjustment.

DAMAGED GOODS

All goods are delivered to the carrier agent in good condition and are signed for as such, thereby ceasing our responsibility. Our terms of sale are F.O.B. shipping point and title passes to the buyer upon delivery of the merchandise to the carrier. If shipments are received in a damaged condition, the consignee must have the carrier's agent make the proper notation on the freight receipt. This will enable the consignee to file and collect his claim without an affidavit.

SAFETY INFORMATION

Before using the items specified, refer to EPIFANES Material Safety and Technical Product Data Bulletins and carefully read all warning labels on containers. All products are designed to be used by experienced professional applicators only.

EPIFANES YACHT COATINGS

are manufactured in Aalsmeer, Holland by W. Heeren & Zoon B.V. Seller makes no express warranties. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. In the event a warranty is created by law, buyer's EXCLUSIVE REMEDY shall be the replacement of any defective product. No other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available to buyer. Some States do not allow the exclusion of implied warranties or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

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SINGLE COMPONENT TOPSIDE FINISHES

EPIFANES YACHT ENAMEL

The mirror-like gloss, color retention and intensity of this enamel surpasses the traditional. Its longevity, surface hardness and flexibility proves it is the ultimate enamel finish for wood. Also suitable for fiberglass and steel.

Suggested List Price

Effective September 1, 2003

VARNISHES AND CLEAR FINISHES

EPIFANES CLEAR GLOSS VARNISH

World famous, highest quality marine spar varnish. Manufactured with tung oil, U.V. filters, phenol and alkyd resins for superior protection.

Code	Description	Size	\$
CV.500	-	500 ml	18.90
CV.1000	-	1000 ml	34.65
CV.5000	-	5000 ml	168.00

EPIFANES RUBBED EFFECT VARNISH

Gives a rich hand-rubbed look for beautiful interior protection.

Code	Description	Size	\$
RE.1000	-	1000 ml	39.50

EPIFANES WOOD FINISH GLOSS

High build, hard varnish like finish without sanding between coats. High gloss beauty with outstanding U.V. protection for teak and other woods. Does not require sanding between coats within three days.

Code	Description	Size	\$
WFG.1000	-	1000 ml	39.50
WFG.500	-	500 ml	21.50

EPIFANES WOOD FINISH MATTE

A finish coat over Wood Finish Gloss. Beautiful, satin sheen with U.V. protection for interior or exterior use!

Code	Description	Size	\$
WFM.1000	-	1000 ml	49.50

EPIFANES POLYURETHANE CLEAR

Extraordinary hardness and a deep clear gloss with built-in U.V. protection for extended freedom from maintenance. Package includes base & reactor. Thinning with Polyurethane Thinner For Brush or Polyurethane Thinner For Spray is required for application.

Code	Description	Size	\$
PUCG.750	-	750 gr	53.00

EPIFANES POLYURETHANE CLEAR SATIN

Produces the extra hardness and durability of a two-part aliphatic urethane based formulation with a subtle satin finish. For all interior wood. Excellent for use on cabin soles or saloon tables. Package includes base & reactor. Thinning with Polyurethane Thinner For Brush or Polyurethane Thinner For Spray is required for application.

Code	Description	Size	\$
PUCS.750	-	750 ml	53.00

RAPIDCLEAR

One-component clear woodfinish. Provides an enhancing U.V. protecting film. It bonds extremely well to teak, preventing discoloration and emphasizes the natural grain. **NO SANDING BETWEEN COATS.** Rapidclear can be applied every 5-6 hours. Four to five coats.

Code	Description	Size	\$
RCC.750	Clear	750 ml.	34.00

RAPIDCOAT

Same as Rapidclear but, provides a lightly tinted, U.V. protecting finish.

Code	Description	Size	\$
RC.750	Natural wood	750 ml.	34.00

Code	Description	Size	\$
YE001.750	#1 Cream	750 ml	29.40
YE002.750	#2 Beige	750 ml	29.40
YE003.750	#3 Wheat	750 ml	29.40
YE004.750	#4 Buff	750 ml	29.40
YE006.750	#6 Tropic Green	750 ml	29.40
YE007.750	#7 Bright Blue	750 ml	29.40
YE008.750	#8 Dark Blue	750 ml	29.40
YE009.750	#9 Sea Green	750 ml	29.40
YE011.750	#11 Dado Brown	750 ml	29.40
YE012.750	#12 Dark Brown	750 ml	29.40
YE013.750	#13 Black Brown	750 ml	29.40
YE014.750	#14 Mahogany	750 ml	29.40
YE016.750	#16 Red	750 ml	29.40
YE017.750	#17 Bold Yellow	750 ml	29.40
YE018.750	#18 Light Gray	750 ml	29.40
YE019.750	#19 Black	750 ml	29.40
YE021.750	#21 Orange	750 ml	29.40
YE023.750	#23 Deep Red	750 ml	29.40
YE024.750	#24 Light Oyster	750 ml	29.40
YE025.750	#25 Alpine White	750 ml	29.40
YE027.750	#27 Gray Mist	750 ml	29.40
YE029.750	#29 Ocean Blue	750 ml	29.40
YE030.750	#30 Teal Green	750 ml	29.40
YE033.750	#33 Light Brown	750 ml	29.40
YE034.750	#34 Choc. Brown	750 ml	29.40
YE035.750	#35 Red Brown	750 ml	29.40
YE048.750	#48 Light Green	750 ml	29.40
YE062.750	#62 Atlantic Green	750 ml	29.40
YE065.750	#65 Deep Green	750 ml	29.40
YE072.750	#72 Dark Green	750 ml	29.40
YE205.750	#205 Deep Blue	750 ml	29.40
YE206.750	#206 Blue Gray	750 ml	29.40
YE210.750	#210 Antique Ivory	750 ml	29.40
YE212.750	#212 Gray	750 ml	29.40
YE213.750	#213 French Gray	750 ml	29.40
YE214.750	#214 Dark Gray	750 ml	29.40
YE215.750	#215 Sky Blue	750 ml	29.40
YE216.750	#216 Pearl Gray	750 ml	29.40
YE217.750	#217 Light Blue	750 ml	29.40
YE218.750	#218 Jade Green	750 ml	29.40
YEA.750	Aluminum	750 ml	29.40

MONOURETHANE COATINGS

Years of testing and on-vessel experience have proven this unique finish to be the most advanced, highly engineered single-part formulation, based on urethane-alkyd resins, available. It gives incredibly hard urethane abrasion and chemical resistance with outstanding gloss, durability, color retention and U.V. protection. May be brushed or rolled with the ease of an enamel. Ideal for fiberglass, plywood and steel.

Code	Description	Size	\$
MUW.750	White	750 ml	38.00
MU3101.750	#3101 Cream	750 ml	38.00
MU3107.750	#3107 Bright Blue	750 ml	38.00
MU3108.75	#3108 Dark Blue	750 ml	38.00
MU3112.750	#3112 Drk Brown	750 ml	38.00
MU3116.750	#3116 Bright Red	750 ml	38.00
MU3117.750	#3117 Bid Yellow	750 ml	38.00
MU3119.750	#3119 Black	750 ml	38.00
MU3121.750	#3121 Orange	750 ml	38.00
MU3124.750	#3124 Oyster	750 ml	38.00
MU3125.750	#3125 Alpine Wht	750 ml	38.00
MU3140.750	#3140 White	750 ml	38.00
MU3165.750	#3165 Green	750 ml	38.00
MU3172.750	#3172 Dark Green	750 ml	38.00
MU3210.750	#3210 Ant. Ivory	750 ml	38.00
MU3212.750	#3212 Gray	750 ml	38.00
MU3218.750	#3218 Green	750 ml	38.00

EPIFANES NAUTIFORTE

The finest, most sophisticated resin has been used to produce a paint that is non-yellowing, gives excellent flow, minimal dirt retention and long lasting gloss. A degree of gloss is activated by exposure to U.V.

Code	Description	Size	\$
NFW.750	White	750 ml	38.00
NF24.750	#24 Light Oyster	750 ml	38.00
NF25.750	#25 Alpine White	750 ml	38.00

SPECIALTY FINISHES

EPIFANES EGGSHELL ENAMEL

Gives luster instead of gloss. Perfect for cabin interiors or any area where a satin effect is desired. Use as a finish coat over EPIFANES Yacht Enamel for the ultimate in subtle elegance and protection.

Code	Description	Size	\$
EEW.750	White	750 ml	36.30

EPIFANES NON-SKID DECK COATING

Exceptionally strong, urethane-alkyd based, single part deck coating. Pre-mixed with polypropylene beads. Two coats rolled, will render textured surface for long lasting non-skid protection.

Code	Description	Size	\$
NSW.750	White	750 ml	32.90
NS212.750	#212 Gray	750 ml	32.90

SPECIALTY ITEMS

POLYPROPYLENE NON-SKID BEADS

Pre-measured package for adding to 750 gr EPIFANES Polyurethane or 750 ml EPIFANES Monourethane.

Code	Description	Size	\$
PPB.20	-	20 gr	6.50

EPIFANES FIBERGLASS PREP CLEANER

A cleaning solvent for bare fiberglass and gelcoat.

Code	Description	Size	\$
FPC.1000	-	1000 ml	18.60

SINGLE COMPONENT PRIMERS

EPIFANES WERDOL WOOD PRIMER

Gives excellent adhesion and filling to bare wood. Sands and fills well.

Code	Description	Size	\$
WPW.750	White	750 ml	18.00
WPG.750	Gray	750 ml	18.00

EPIFANES FIBERGLASS PRIMER

Provides optimum adhesion to fiberglass or gelcoat surfaces.

Code	Description	Size	\$
FPW.750	White	750 ml	27.25

EPIGROND PRIMER

This multi purpose primer applied over one-part paints or anti-corrosive systems ensures maximum adhesion for subsequent one-part finishes.

Code	Description	Size	\$
EPW.750	White	750 ml	26.00

EPIFANES FIBERGLASS FILLER

A quick drying two-part filler for use on one & two-part systems or directly on bare fiberglass above the water line.

Code	Description	Size	\$
FFW.500	White	500 gr	22.85

THINNERS & ADDITIVES

BRUSH THINNER FOR PAINT & VARNISH

A pure white spirit for thinning all EPIFANES one-part paints and varnishes.

Code	Description	Size	\$
TPVB.500	-	500 ml	7.50
TPVB.1000	-	1000 ml	13.25

SPRAY THINNER FOR PAINT & VARNISH

A fast evaporating solvent for spray applications with all EPIFANES one-part paints & varnishes.

Code	Description	Size	\$
TPVS.1000	-	1000 ml	13.25

POLYURETHANE THINNER FOR BRUSH

Code	Description	Size	\$
PUTB.500	-	500 ml	8.50
PUTB.1000	-	1000 ml	14.40

POLYURETHANE THINNER FOR SPRAY

Code	Description	Size	\$
PUTS.1000	-	1000 ml	14.40

ACCELERATOR FOR PAINT AND VARNISH

A special resin based additive which speeds the curing process of EPIFANES one-part paints and varnishes. This will not effect application of the finish. Not to be used with EPIFANES Monourethane Coating or EPIFANES Nautiforte.

Code	Description	Size	\$
APV.500	-	500 ml	19.50

EASY-FLOW

Flow enhancer! Epifanes Easy-Flow is based on a selection of natural oils. The formulation produces a versatile, multi-purpose additive or stand alone coating

Code	Description	Size	\$
EF.1000	-	1000 ml	23.95

EPIFANES BRUSHES

Highest quality, traditional European styled brushes. Hand set and chiseled pure Chinese bristle. Each hair is split to produce optimum softness. Old world quality for those who demand the best working tools.

STYLE-ROUND

A Dutch tradition. Using a turning motion while cutting an edge always gives even flow of product. The volume of bristles gives great holding capacity. The chiseled shape ensures accurate paint spread.

Code	Description	Comp. Sizes	\$
BR.10	#10 Round	10 mm - 3/8 inch	13.05
BR.40	#40 Round	40 mm - 1 1/2 inch	24.75

STYLE-FULL

Elliptical, similar to a flat brush but with rounded edges. Ideal for paint or varnish application.

Code	Description	Comp. Sizes	\$
BF.50	#50 Full	50 mm - 1 1/2 inch	29.50
BF.55	#55 Full	55 mm - 2 inch	36.50
BF.60	#60 Full	60 mm - 2 1/4 inch	41.85
BF.65	#65 Full	65 mm - 2 1/2 inch	51.75
BF.75	#75 Full	75 mm - 3 inch	54.30

Late Additions

EPIFANES BRUSHKEEPER

Translucent polyethylene container measures 5" X 5" X 14" tall and holds four to eight brushes. A tight fitting lid prevents spills and evaporation. Cleverly designed removable rack.

Code	Description	Size	\$
BK.1			39.50

EASY-FLOW

Epifanes Easy-Flow is a versatile, multi-purpose additive or stand alone coating. For use on steel as a penetrating oil and as an extra rust inhibitor in metal primers. For use on wood as an impregnating sealer and as an additive in wood primers. For use in varnish and paint for enrichment and flow enhancing.

Code	Description	Size	\$
EF.1000		1000 ml.	23.95

Payment Terms

Regular customer Open Account terms are net 30. A 1 1/2% per month (18% annual rate) service charge will be added to all overdue accounts.

Conditions of Sale

We reserve the right to select our customers and the right to refuse any and all orders at any time and to terminate sales or delay shipping to existing customers with an outstanding account balance at time of order and to ship C.O.D. to regular open Account customers with a delinquent payment history or payment discrepancies, with or without notice. Prices, conditions, products and terms are subject to change or withdrawal at any time.

Shipping Terms

All Epifanes products are priced F.O.B. shipping point.

Returned Goods

Merchandise returned without prior written authorization from Epifanes North America Inc. will be refused. In cases where responsibility for returned goods is entirely ours and permission is granted for the return, full credit will be allowed, plus the costs of the returned prepaid freight. When the responsibility of the returned goods is based upon customer error and permission is granted prior to the return of the goods all merchandise will be subject to a restocking and handling charge of 15% of original invoice amount for goods returned. No credit will be granted for shop worn, marked, discontinued or damaged materials. Any materials which have exceeded 12 months age from the invoice date will not be considered for return under any circumstances.

Damaged Goods

All goods are delivered to the carrier agent in good condition and are signed for as such, thereby ceasing our responsibility. Our terms of sale are F.O. B. Shipping Point, and title passes to the buyer upon delivery of the merchandise to the carrier. If shipments are received in a damaged condition, the consignee must have the carrier agent make the proper notation on the freight receipt. This will enable the consignee to file and collect his claim without an affidavit.

Safety Information

Before using the items specified, refer to Epifanes Material Safety and Technical Product Data Bulletins and carefully read all warning labels on containers. All products are designed to be used by experienced professional applicators only.

Epifanes Yacht Coatings

are manufactured in Aalsmeer, Holland, by W. Heeren & Zoon B.V. and imported exclusively by Epifanes North America Inc. Seller makes no express warranties. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. In the event a warranty is created by law, buyer's EXCLUSIVE REMEDY shall be the replacement of any defective product. No other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available to buyer.

Some States or provinces do not allow the exclusion of implied warranties or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State or province to province.

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