

Twocomponent paint system on wood above the waterline

August-2018

Preparation of bare wood

Wood is a natural product and sensitive to humidity and the formation of fungi. In case of longterm exposure to moisture wood fibres may be broken by fungi (rot). Moisture contents INSIDE the wood may not exceed 17%. Do not apply paint on too wet a wooden surface. Allow the wood to dry first with ample ventilation.

Preparing wood rot

- Widely cut out all by rot affected wood sections into dry wood
- Degrease bare wood with Epifanes Cleaning Solvent.
- Precoat all areas needing repair with one coat Epifanes Epoxy Primer, thinned 25%.
- After drying and sanding with dry abrasive paper P 120-180, fill with Epifanes Epoxy Filler 1500 (max. 2 cm.)
- After the filler or resin has dried (24 h.), degrease with Epifanes Cleaning Solvent and sand with dry abrasive paper P60-80 to a smooth surface.
- In case of larger repairs make a replacement piece of wood and glue this into the repair area using an epoxy resin (i.e. West System). After curing, degrease with Epifanes Cleaning Solvent and sand the repaired area with dry abrasive paper P180

Degreasing

Make sure that the wood is dry and free of all dirt. Oily, resinous types of wood, like pine and oregon pine and tropical type of wood, like teak and iroco must be well degreased with Epifanes Cleaning Solvent. Degreasing by performing the two-towels-methode: keep one towel well saturated and wipe in one direction on the fibreglass surface. Use the second towel to remove the collected contamination. Always work in one direction. Do not wipe back and forth. Replace towels regularly. On other type of wood and existing paint layers, degrease using Epifanes Spraythinner for Paint & Varnish. Do not use water! This may activate the wood acids.

Sanding

In case of very rough and uneven wooden surfaces, first sand with dry abrasive paper P60-80. Subsequently sand the bare wood to a fresh surface using P100-150 dry abrasive paper. On softer wood types sand finally with P220 dry. Rounded surfaces must be sanded by hand. Always sand along the wood grain. Remove all dust and degrease once more with Epifanes Cleaning Solvent or Epifanes Spraythinner for Paint & Varnish .

Choice of system

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

Working conditions

All surfaces to be painted must be 100% dry. The relative air humidity should not exceed 70%. Temperature of the paint, the object/surface and working area should be more or less the same. Large temperature differences may have repercussions on adhesion, drying and hardening. The temperature of the (bare) steel must at least 3°C. above the dew point. Recommended temperature range of application and curing : 12 – 20°C.

If needed, first sand the wood to a fresh surface using dry abrasive paper P60-80. Subsequently sand with finer grits from P100 towards P220 dry. Always sand along the wood grain. Remove all sanding dust and degrease once more. Allow to fully evaporate before applying varnish.

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System build up brush/roller application

Coat #	Product	Thinning %	filmthickness			Recoatibility in hours			Sandability
			nat	droog		12°C.	20°C.	28°C.	
1.**	Epoxy Primer	25%	80-200µm	40-100µm	Brush	18	12	10	24 hours
2.*	Epoxy Filler 1500	n.v.t.	n.v.t.	n.v.t.	trowel	36	24	20	24 hours
3.*	Epoxy Fin. Filler	n.v.t.	n.v.t.	n.v.t.	trowel	36	24	20	24 hours

After cure, degrease with Epifanes Cleaning Solvent or denaturated alcohol and sand with P180.

4.**	Epoxy HB Coat	5-10%	100-200µm	85-170µm	Brush	10	6	4	24 hours
5.**	Epoxy HB Coat	5-10%	100-200µm	85-170µm	Brush	10	6	4	24 hours
6.	Poly-urethane Primer	0-5%	80-120µm	40-60µm	Brush	10	6	4	24 hours

Allow 24 hours to cure. Sand with P320.

7.	Poly-urethane Yacht Paint	0-5%	60-70µm	30-35µm	Brush	36	24	18	24 hours
8.***	Poly-urethane Yacht Paint	0-5%	60-70µm	30-35µm	Brush	36	24	18	24 hours
9.	Poly-urethane Yacht Paint	0-5%	60-70µm	30-35µm	Brush	36	24	18	24 hours

Recommended thinners:

Epoxy primer	Epoxy HB Coat	Poly-urethane Primer	Poly-urethane Yacht Paint
Thinner D-601	Thinner D-601	Poly-urethane Brushthinner	Poly-urethane Brushthinner or PU Slow Reducer when applying above 18°C ****

Remarks:

- * Fill only if irregularities remain visible in the final result. Use Epifanes Epoxy Filler when filling deeper than 15-20mm. This light weight epoxy filler has a higher resistance to sagging. After curing, always degrease with Epifanes Cleaning Solvent.
- ** After curing degrease Epoxy Primer en Epoxy HB Coat with Epifanes Cleaning Solvent to remove amine blush. Epoxy HB Coat is available in light grey and black
- *** If applied between 24 -48 hours Poly-urethane Yachtpaint coats may applied without intercoat sanding. If applied after 48 hours, always sand. Sand second-last coat Poly-urethane yacht paint with wetordry abrasive paper P400.
- **** When applying above 18°C. use Epifanes PU Slow Reducer. This slow evaporating thinner provides a longer open time allowing a better flow.

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