

DESCRIPTION

This system describes how a deck of a steel yacht may be coated with a two component polyurethane system.

PRINCIPAL CHARACTERISTICS

This coating system may be applied directly to properly pre-treated steel and gives an excellent protection against corrosion. This system is scratch resistant, resistant to a wide range of chemicals and provides excellent colour and gloss retention. In combination with Double Coat anti-slip powder a non-skid surface may be obtained.

SURFACE CONDITION

Steel, in good condition.

SURFACE PREPARATION

New, untreated steel

1. Remove all shop primers, rust and corrosion products, preferably by grit blasting to ISO Sa2 ½ or by power tool cleaning to ISO St3;
2. The surface should be dry and free from grease, loose particles and other contamination.

Maintenance, previously coated steel

1. Clean the surface thoroughly to remove all contamination such as salt deposits, dirt, grease and other foreign matter, preferably by high pressure water cleaning and with a suitable cleaner;
2. Remove all rust, corrosion products and paint layers with insufficient adhesion (including one component paints in good condition), preferably by grit blasting to ISO Sa2 ½ or by power tool cleaning to ISO St3;
3. Previous layers of two component paint which have good adhesion and which are in good condition should be abraded; preferably by sweep blasting or using grit paper;
4. Clean and dry the surface thoroughly.

MATERIALS AND SPREADING RATES

The following materials are used in this paint system:

Variopox Plamuur	spreading rate depends on surface condition
Variopox Finishing Plamuur	spreading rate depends on surface condition
IJmopox ZF primer	spreading rate approx. 0,18 l/m ²
IJmopox HB coating	spreading rate approx. 0,15 l/m ²
IJmopox Verdunner	spreading rate depends on application method
Double Coat	spreading rate approx. 0,30 kg/m ²
Double Coat Kwastverdunner	spreading rate depends on application method
Double Coat Anti-slip powder	spreading rate depends on application method
Double Coat Ontvetter	spreading rate depends on surface condition

APPLICATION

New, untreated steel

1. Apply one to two coats of IJmopox ZF primer to a total dry film thickness of 100 µm (minimum spreading rate approx. 0,18 l/m²);
2. When necessary, repair small damages and dents with Variopox Plamuur or Variopox Finishing filler;
3. Apply one to two coats of IJmopox HB coating to a total dry film thickness of 100 µm (minimum spreading rate approx. 0,15 l/m²);
4. Apply two coats of Double Coat to a total dry film thickness of 80 µm (minimum spreading rate approx. 0,2 kg/m²);
5. Apply a third coat of Double Coat;

6. Add immediately before application of the third coat 50 gram Double Coat Anti-slip powder to 500 gram Double Coat (base component and hardener) when a non-skid surface is required. Mix the paint thoroughly and apply in an even coat by roller (minimum spreading rate approx. 0,1 kg/m²).

Maintenance, previously coated steel

1. Apply as spot-repair to damaged and bare areas one to two coats of IJmopox ZF primer to a total dry film thickness of 100 µm (minimum spreading rate approx. 0,2 l/m²);
2. When required, repair small damages and dents with Variopox Plamuur or Variopox Finishing plamuur;
3. Apply one to two coats of IJmopox HB coating to a total dry film thickness of 100 µm (minimum spreading rate approx. 0,15 l/m²);
4. Apply two coats of Double Coat to a total dry film thickness of 80 µm (minimum spreading rate approx. 0,2 kg/m²);
5. Apply a third coat of Double Coat;
6. Add immediately before application of the third coat 50 gram Double Coat Anti-slip powder to 500 gram Double Coat (base component and hardener) when a non-skid surface is required. Mix the paint thoroughly and apply in an even coat by roller (minimum spreading rate approx. 0,1 kg/m²);

ADDITIONAL INFORMATION

- Repair of damages and dents
Damaged areas and dents may be repaired using epoxy fillers such as Variopox Plamuur. Use Variopox Finishing plamuur as last layer of filler when a smooth, fine finish is required. Grit paper the surface after application and curing of the filler and clean and degrease area with Double Coat Ontvetter. Touch-up repaired areas with the following layer of the coating system to eliminate absorption of the filler.
- Previous paint: one or two component?
When it is not known if the previous coating system was based on one- or two component products, this can be determined with a simple test. Soak a small piece of cloth in Double Coat Ontvetter and leave this for 15 minutes on the surface. Remove the cloth and check the surface. When the previous paint has not dissolved, is not softened and cannot be easily removed it is most probably a two component paint. Only then it is possible to apply a fresh coat of two component paint.
- Durability and surface preparation
The durability of any paint system depends on a number of variables, amongst others: total dry film thickness, method of application, skill of labour, the conditions during which the coating is applied and cured, the exposure conditions during service and the preparation of the surface. Insufficient surface preparation might lead to blistering and loss of adhesion.
- Sanding
A durable adhesion will be obtained by thorough preparation of the surface. This may be achieved by sanding the surface. Sanding is also necessary when the time elapsed between application of each coat exceeds the maximum recoating interval.
During application of the finishing coats, we recommend to use for each coat a finer grit paper. The table gives the recommended grit sizes:

Grit paper:	Recommended for:
P24 – P36	Suitable for steel prior to application of IJmopox ZF primer.
P60	Suitable for polyester gelcoat prior to the use of epoxy adhesives and bonding pastes.
P60 – P80	Suitable for: <ul style="list-style-type: none"> Removal of old coats of paint, Sanding aluminium prior to application of IJmopox ZF primer.
P120	Suitable for: <ul style="list-style-type: none"> Sanding polyester gelcoat prior to repair with fillers, Sanding of Variopox Injectiehars, Variopox Impregneerhars en Variopox Universele hars.
P120 – P180	Suitable for: <ul style="list-style-type: none"> Wood, after application of first coat of paint, Epoxy fillers, Polyester fillers, Sanding of IJmopox ZF primer and/or IJmopox HB coating between each coat.
P180 – P220	Suitable for: <ul style="list-style-type: none"> Sanding of Variopox Injectiehars, Variopox Impregneerhars en Variopox Universele hars, Sanding of IJmopox ZF primer of IJmopox HB coating prior to application of Double Coat.
P220 – P280	Suitable for sanding gelcoat prior to application of Double Coat.
P320 – P400	Suitable for sanding Double Coat between each coat.
P600	Suitable for sanding Double Coat prior to application of the final coat Double Coat when dark colours are used such as DC 855, DC 854 en RAL 5011, etc.
Finer then P600	Suitable to remove dull areas prior to polishing.

• Example application schedule

Step		Dry film thickness (µm)	Spreading rate (m ² /l)	Recoating interval at 20 °C	Preparation before next step
1	Pre-treatment				
2	Application first coat IJmopox ZF primer	50	11,0	16 hours	When recoated within 72 hours no preparation is required, otherwise sanding with P180.
3	Application second coat IJmopox ZF primer	50	11,0	16 hours	
4	Repair with Variopox plamuur	n.a.	n.a.	48 hours	Sanding P180.
5	Application first coat IJmopox HB coating grey or white	50	14,0	8 hours	When recoated within 72 hours no preparation is required, otherwise sanding with P180.
6	Application second coat IJmopox HB coating black or grey	50	14,0	8 hours	
7	Application first coat Double Coat	40	10,8	24 hours	When recoated within 48 hours no preparation is required, otherwise sanding with P240 - P320. Use between layers finer grit paper to avoid scratches in finish.
8	Application second coat Double Coat	40	10,8	24 hours	
9	Application third Double Coat	40	10,8	24 hours	Add Double Coat Anti-slip powder to Double Coat when a non-skid surface is required..

- Relation dry/wet film thickness

Volume % IJmopox thinner	0	3	6	9	12
Wet film thickness IJmopox ZF primer at 50 µm dry film thickness	91	94	96	99	102
Wet film thickness IJmopox HB coating at 50 µm dry film thickness	71	74	76	78	80
Volume % Double Coat brush thinner	0	2	4	6	8
Wet film thickness Double Coat at 40 µm dry film thickness	77	78	80	82	84

For detailed information on the products mentioned in this sheet, please refer to our technical information sheets.

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Disclaimer

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