

Selection & Specification Data

Generic Type	Two pack reinforced high solid aliphatic polyurethane
Description	Windmastic Topcoat HSX is a matt weathering resistant polyurethane topcoat with excellent abrasion resistance for use on wind turbine rotor blades. Repair Kit is used for touch-up work during blade manufacture or for maintenance.
Features	• Durable topcoat in combination with epoxy primer for long service life • Fast curing • High solid, low VOC • Very good abrasion resistance.
Colors	RAL 7035, 9010, 2009, 3020 Other colors on request
Finish	Matt
Primers	Windmastic 300 or Windmastic Primer FC
Topcoats	Normally not topcoated.
Dry Film Thickness	75-150 microns dry film thickness, standard 100 microns.
Solids Content	By volume: 64 ± 2%
VOC	310 - 335 g / l depending on colour
Theoretical Coverage Rate	6.4 m ² /l at 100 µm Allow for loss in mixing and application.
Dry Temp. Resistance	Continuous: 110°C Non-continuous: 130°C
Limitations	Not recommended for immersion service in aromatic or ketone solvents and strong oxidizing acids.

Substrates & Surface Preparation

General	Surface must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
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Application Equipment

This product is for touch-up / repair is only and not supplied for spray application.

Brush & Roller (General)	For small areas and stripe coating only. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding.
Brush	Use a medium bristle brush.
Roller	Use a medium nap phenolic core roller.

Mixing & Thinning

Mixing	Mix Part A, add Part B to Part A and mix again. DO NOT MIX PARTIAL KITS.
Ratio	5 : 1 (A to B) by volume
Thinning	May be thinned up to 5 % with Carboline Thinner 25.
Pot Life	1 hour at 20°C and less at higher temperatures.

Cleanup & Safety

Cleanup	Use Carboline Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
Ventilation	When used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.
Caution	This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	15-30°C	15-30°C	15-30°C	35-60%
Minimum	5°C	2°C	2°C	20%
Maximum	35°C	50°C	40°C	80%

Industry standards are for substrate temperatures to be 3°C above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Recoat	Maximum recoating interval	Dry to disc-sand** Minimum
5°C	18 Hours	14 Days	26 Hours
10°C	12 Hours	10 Days	16 Hours
20°C	5 Hours	7 Days	10 Hours
30°C	2.5 Hours	4 Days	6 Hours
40°C	1 Hours	2 Days	4 Hours

Above recoating times are guidelines only. Actual recoating times can be shorter or longer depending on film thickness, ventilation, moisture or other local conditions. Please observe that the temperatures gives are based on substrate (surface) temperatures.

* Light abrasion of the surface may be necessary when the maximum recoating intervals are exceeded.

**Based on handhold disc-sander using abrasive disc 120.

Packaging, Handling & Storage

Kit Standard	Part A 0,5 liter Part B 0,1 liter
Storage (General)	Store indoors
Storage Temperature & Humidity	5°-40°C 10 - 90% Relative Humidity
Shelf Life	24 months at 20°C Part B is moisture sensitive and reduced shelf life may be observed when stored at unsuitable conditions.

Note

This product shall only be used as a single-coat or in a system with other recommended Carboline products. Otherwise an approval shall be issued by Carboline.

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