Windmastic Topcoat HSX

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Two pack reinforced high solid aliphatic polyurethane.
Description	Windmastic Topcoat HSX is a matt weathering resistant polyurethane topcoat with very good erosion resistance for use on wind turbine rotor blades. **Also available as Windmastic Topcoat HSX Repair Kit for repair and touch up by brush or roller.**
Features	• Durable topcoat in combination with Windmastic Primers for long service life • Fast curing • High solid, low VOC • Very good erosion resistance
Color	RAL 7035, 9010, 2009, 3020 Other colors on request (RAL 5022, 7000, 9004, 9016, 9018)
Finish	Flat
Primer	Windmastic Primers, depending on blade manufacturing process.
Wet Film Thickness	115 - 230 microns, standard 155 microns.
Dry Film Thickness	75 - 150 microns (2.95 - 5.9 mils) standard 100 microns Multiple coats can be required to obtain desired film thickness
Solid(s) Content	By volume: 64 ± 2%
Theoretical Coverage Rates	6.4 m²/l at 100 µm Allow for loss in mixing and application.
VOC Value(s)	310 – 335 g/l depending on colour
Dry Temp. Resistance	Continuous: 110°C (230°F) Non-Continuous: 130°C (266°F)
Limitations	Not recommended for immersion service
Topcoats	Normally not topcoated

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.

MIXING & THINNING

Mixing	Power mix separately and then add Part B to Part A and power mix. DO NOT MIX PARTIAL KITS.
Thinning	May be thinned up to 10 % with Carboline Thinner # 25.
Ratio	5 : 1 (A to B) by volume By plural spray a tolerance of ±5 is acceptable giving A : B between 5.05 : 1/ 4.95 : 1 on volume
Pot Life	1 hour at 20°C and less at higher temperatures.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application	This is a high solids coating and may require slight adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco. Plural spray is recommended for large area application. Follow the manufacturer instruction for operation of the equipment.
Airless Spray	Pump ratio: 42:1 (min.) Tip Size: 0.015 – 0.0023 Further information can be found in Application Guide
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.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	5°C (41°F)	2°C (36°F)	2°C (36°F)	20%
Maximum	35°C (95°F)	50°C (122°F)	40°C (104°F)	80%

Industry standards are for substrate temperatures to be 3ºC above the dew point. Condensation due to substrate temperatures below the dew point can interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

CURING SCHEDULE

Surface Temp.	Dry to Recoat	Maximum Recoat Time
5°C (41°F)	18 Hours	14 Days
10°C (50°F)	12 Hours	10 Days
20°C (68°F)	5 Hours	7 Days
30°C (86°F)	2.5 Hours	4 Days
40°C (104°F)	1 Hour	2 Days

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 given are based on substrate (surface) temperatures.
Note: Light abrasion of the surface may be necessary when the maximum recoating intervals are exceeded.
Additional information can be found in Application Guide

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 SDS 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.

CLEANUP & SAFETY

Ventilation	When used 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 applicable regulations. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 24 months at 24 °C Part B: 18 months at 24 °C Part B is moisture sensitive and only full kit should be used.
Storage Temperature & Humidity	5°-40°C 10 - 90% Relative Humidity
Storage	Store indoors.
Packaging	Part A 15 liters Part B 3 liters Also available in 180 liter drums and 0.6 liter Repair Kits

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