product data carboline®

Windmastic 8801

Selection & Specification Data

Generic Type	Aliphatic Polyurethane
Description	Windmastic 8801 is a topcoat Matt-finish, weathering resistant polyurethane with excellent abrasion-resistant qualities specially designed for laminated turbine rotor blades.
Recommended Uses	Steel, concrete, and fiberglass reinforced epoxy where mechanical/chemical exposure is common. The product is specially designed as a topcoat over Windmastic 304 primer used on wind turbine rotor blades. Can also be used on other areas exposed to abrasion and general weathering
Color	8825 White
Finish	Flat
Primers	Windmastic 304
Dry Film Thickness	2-5 mils (50-125 microns) per coat.
Solids Content	By Volume: 55% ± 2%
Theoretical Coverage Rate	882 mil ft^2 (21.6 m^2/l at 25 microns) 176 ft^2 at 5 mils (4.3 m^2/l at 125 microns) Allow for loss in mixing and application.
VOC Values	As supplied: 3.37 lbs./gal (404 g/l) Thinned: 19oz/gal with # 25 Thinner: 3.78 lbs./gal (463 g/l) These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Continuous: 230°F (110°C) Non-Continuous: 266°F (130°C)

Substrates & Surface Preparation

General	Surfaces 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. Refer to the specific primer's Product Data Sheet for detailed requirements of the specified primer.
Steel	SSPC-SP6 with a 1.5-2.5 mil (37.5-62.5 micron) surface profile for maximum protection. SSPC-SP2 or SP3 as minimum requirement. Prime with specific Carboline primers as recommended by your Carboline sales representative.
Galvanized Steel	Prime with specific Carboline primers as recommended by your Carboline Sales Representative. Refer to the specific primer's Product Data Sheet for substrate preparation requirements.
Aluminum	SSPC-SP1 and prime with appropriate Carboline primer as recommended by your Carboline sales representative.
Previously Painted Surfaces	Lightly sand or abrade to roughen and degloss the surface. Existing paint must attain a minimum 3B rating in accordance with ASTM D3359 "X-Scribe" adhesion test. Prime with specific Carboline primers as recommended by your Carboline sales representative.

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Application Equipment

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.
General Guidelines:

Spray Application (General) This is a high solids coating and may require 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.

Conventional Spray Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

Airless Spray

Pump Ratio:	30:1 (min.)*
GPM Output:	3.0 (min.)
Material Hose:	3/8" I.D. (min.)
Tip Size:	.015-.019"
Output PSI:	2100-2300
Filter Size:	60 mesh

*Teflon packings are recommended and available from the pump manufacturer.

Brush & Roller (General) Recommended for small and touch-up areas only. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).

Brush Recommended for touch-up only. Use a medium, natural bristle brush.

Roller Use a medium-nap synthetic roller cover with phenolic core.

Mixing & Thinning

Mixing Power mix Part A separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

Ratio 6:1 Ratio (A to B)
(0.875 Gal. Kit)
Part A: 6 pints (partial fill) in a one-gallon can
Part B: Urethane Convertor 811: 1 pint in a 1-pint can

Thinning Spray: Up to 19 oz/gal (15%) with # 25 Thinner.
Roller: Up to 19 oz/gal (15%) with # 25 Thinner.
Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Pot Life 2 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use. MOISTURE CONTAMINATION WILL SHORTEN POT LIFE AND CAUSE GELLATION.

Cleanup & Safety

Cleanup Use Windmastic Thinner 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 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. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.

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
Minimum	40°F (4°C)	40°F (4°C)	40°F (4°C)	0%
Maximum	86°F (30°C)	86°F (30°C)	100°F (38°C)	90%

Industry standards are for substrate temperatures to be 5°F (3°C) above the dew point. This product simply requires the substrate temperature to be above the dew point.
Caution: This Product is moisture sensitive in the liquid stage and until cured. Protect from high humidity, dew and direct moisture contact until cured. Application and/or curing in humidities above maximum, or exposure to moisture from rain or dew may result in a loss of gloss and/or microbubbling of the product.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Minimum Dry to Recoat*	Maximum Dry to Recoat*	Final Cure
40°F (4°C)	24 Hours	10 days	28 Days
50°F (10°C)	12 Hours	6 days	14 Days
75°F (24°C)	5 Hours	3 days	7 Days
90°F (32°C)	3 Hours	2 days	4 Days

These times are based on a 2.0-5.0 mil (75-125 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure.

*Surface must be clean and dry. As part of good painting practice it is recommended to test for adhesion by wiping the surface with Thinner 25. If the film shows a slight "tack" the surface is suitable for recoating without extensive surface preparation such as abrading.

Packaging, Handling & Storage

Shipping Weight (Approximate) .875 Gallon Kit: 11 lbs (5 kg)
50 Gallons Part A: 640 lbs (291 kg)
5 Gallons UC 811: 51 lbs (23 kg)

Flash Point (Setaflash) Part A: 87°F (30°C)
Part B: 127°F (52°C)

Storage (General) Store Indoors.

Storage Temperature & Humidity 40° -110°F (4°-43°C)
0-80% Relative Humidity

Shelf Life Part A: Min. 24 months at 75°F (24°C)
Part B: Min. 24 months at 75°F (24°C)

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**

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