DUROMAR®

PRODUCT DATA SHEET

WE-9300

Leading Edge Protection – Wind Energy

GENERAL DESCRIPTION

WE-9300 is a 2-component coating system specifically designed to protect the leading edge of wind turbine blades. This product has excellent strength and flexibility, and is uniquely engineered to combine outstanding UV stability with excellent impact and abrasion resistance. It may be applied by brush, roller or airless spray equipment.

FEATURES

- Environmentally friendly, Zero VOC coating system
- Outstanding color stability and gloss retention
- Excellent adhesion to epoxy and polyester blades
- Tack-free in 7 hours at 70ºF
- Designed for superior longevity with excellent abrasion and impact resistance

PACKAGING

Available in ½ kg, 1 kg, 2 kg kits and 5 gal bulk units.

COVERAGE

WE-9300 has the consistency of thick paint and can be applied up to 20 mils per coat. Theoretical coverage at 10 mils is 28ft²/kg (2.5m²/kg).

MIXING RATIO

3.6 parts base (B) to 1 part (A) hardener by weight

2.5 parts base (B) to 1 part (A) hardener by volume

POT LIFE

For a 1 kg unit, mixed at 70ºF(20°C), pot life is approximately 40 minutes. Higher temperatures or larger mass will shorten this time; lower temperatures or smaller mass will extend it. Pot life can also be extended by spreading the mass out to dissipate heat.

COLORS

WE-9300 is available in white, red and light grey. All colors possess excellent UV stability.

TECHNICAL DATA AND INFORMATION

Physical Properties of Cured System:	
Density	1.34 g/mL
% Solids	100
Flexural Strength @ 70ºF	22,300 psi
Tensile Strength @ 70ºF	13,000 psi
Tensile Shear @ 70ºF	2,900 psi
Adhesion (Epoxy resin Fiberglass)	>2500 psi
Adhesion (Polyester resin Fiberglass)	>2000 psi
Abrasion Resistance[1]	4.9 mg lost
Impact Resistance	158 in lbs
Color Retention[2]	Excellent
60º Gloss Retention[2]	Excellent
Hardness	80 – 77 Shore D

[1] ASTM D 4060 Taber Abrasion Test, CS 17 wheel with 1 kg weight. Weight lost per 500 cycles.

[2] ASTM G154 Accelerated Weathering. After 720 hours exposure

SURFACE PREPARATION

- For maximum adhesion, material should be applied to a firm, clean, dry and abraded surface.
- Best results will be obtained by abrasive blasting the surface.
- If blasting is impractical, a grinding wheel, needle gun, or very stiff wire brush may be used.
- Clean greasy, oily or waxed surfaces with suitable solvent before applying material.

MIXING

For standard kits mix ALL of Part A with ALL of Part B. Pour Part A into Part B bucket and mix for 5 minutes while scraping down the sides. Duromar recommends “boxing” the material to ensure adequate mixing.

CLEANUP

Most solvents and commonly used thinners such as MEK, acetone and xylene can be used for cleaning tools and equipment. Duromar also supplies a non-flammable, non-hazardous safety solvent **Duromar T-1** which can be used. DO NOT USE TO THIN MATERIAL FOR APPLICATION.

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706 Washington Street, Pembroke, MA 02359 USA • Tel. (781) 826-2525 • Fax (781) 826-2150
www.duromar.com

APPLICATION

WE-9300 is best applied by plural component airless spray or by hand with a roller or brush.

- Minimum Thickness/Coat 10mils 250µ
- Max. Thickness/Coat 20mils 500µ
- Number of Coats 1-2
- Min. Application Temperature º 50 ºF 10 ºC

For best results, do not apply:

- When humidity is over 90%
- When there is moisture on the surface
- When surface temperature is not 5 ºF(3 ºC) above dew point

OVERCOATING

For thicker coating and repairs, two or more coats may be employed. **WE-9300** may be overcoated with other UV-Stable Duromar products. In high humidity or cold temperatures, a blush may develop which should first be wiped down with soap & water and then rinsed with water. The following table is an approximate guide to the earliest and latest times an overcoat may be applied:

WE-9300 Overcoating Window:

50ºF (10ºC)	70ºF (20ºC)	90ºF (30ºC)
8-72 hrs.	6-48 hrs.	3 - 24 hrs.

At 70 ºF, if 24 hours have elapsed or the material is dry to the touch, it must be roughened before overcoating. The preferred method is a light abrasive brush blasting with a soft media like walnut shells. Other treatments are light sanding, grinding or wire brushing.

CURING SCHEDULE

Temperature	50ºF (10ºC	70ºF (20ºC)	90ºF(30ºC)
Dry to Touch	14 hours	7 hours	4 hours
Functional Cure	48 hours	24 hours	12 hours
Full Cure	120 hours	96 hours	48 hours

Q/C

The material should be visually inspected just after application and touched up where necessary.

STORAGE/SHELF LIFE

Store in dry area in closed containers between 50 ºF(10°C) and 100ºF(40°C). Shelf life at these conditions is greater than one year.

HEALTH AND SAFETY

READ AND UNDERSTAND ALL MATERIAL GIVEN IN THE MSDS SHEETS BEFORE USING THE PRODUCT.

WE-9300 DOES NOT CONTAIN ANY FLAMMABLE MATERIAL OF ANY KIND. HOWEVER, THE MATERIAL IS COMBUSTIBLE. IN THE EVENT OF A FIRE, DRY POWDER, FOAM, OR CARBON DIOXIDE FIRE EXTINGUISHERS SHOULD BE USED. FIRE FIGHTERS SHOULD WEAR RESPIRATORS.

USE PROTECTIVE GLOVES AND EYEGLASSES WHEN USING.

USE IN AREAS OF GOOD VENTILATION.

LIMITED WARRANTY

All recommendations covering the use of this product are based on past experience and laboratory findings. Methods or conditions of application and use of the product are beyond our control. We assume responsibility only for the uniformity of our product within normal manufacturing balances.

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