

**BladeSkyn<sup>®</sup>**  
Applied Material Science

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**Technical data sheet**



**BLADE DYNAMICS**

## Description

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**Bladeskyn®** is a revolutionary wind turbine blade surface material that delivers new levels of protective coating performance using thermoplastic nanotechnology.

It is a self adhesive film with a matt surface finish and complete opacity in the range of RAL colours used in the Wind turbine market.

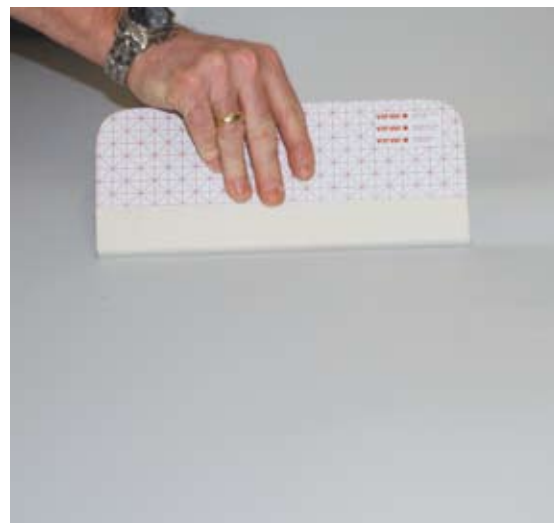
**Bladeskyn®** combines superior through life weathering performance and ease of application over flat and contoured surfaces.

It is supplied in 50 lm rolls. Available widths are from 0.5m to 1.0m.

## Benefits

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1. **Absolute UV stability**
2. **Minimal dirt pickup**
3. **Excellent abrasion resistance**
4. **Very low reflectivity**
5. **Assured surface properties**
6. **Repeatable process**
7. **Simple, clean application**



## Physical Properties

RAL Colour	RAL9018, RAL9010, RAL7035, RAL7040, RAL2009, RAL3020
Thickness	130 µm
Area Weight	200 g/m <sup>2</sup>
Adhesive	Proprietary formulation
Release type	Silicone coated paper
Paper colour	White

## Characteristics

Min application temperature	+10°C
Max application temperature	+35°C
Service temperature	-40°C to 80°C
Adhesive tack	Medium
Dimensional stability (DIN 53479)	< 1%
Gloss 60°	< 35
Outdoor durability	20 years

## Mechanical Properties

Adhesion to glass epoxy with P120 sanded surface (180° peel)	26N/25mm
Adhesion to glass epoxy with P120 sanded surface (90° peel)	14N/25mm
Tensile strength	35N/25mm
Elongation at break	100%

## Resistance against chemicals and solvents (DIN 51958)

Distilled water/32°C @ 150 hours	No change
Diesel oil / normal climate @ 24 hrs	No change
Hydraulic oil / normal climate @ 24 hours	No change
Gasoline @1 Hr	No change
Cold cleaning agent mixture @ 24 hours	No change
Soap / 65°C @ 8 hours	No change
Anti-freeze @ 24 Hrs	No change
10% HCL @ 10 Min	No change
10% NH4 OH @ 10 Min	No change

## Storage and transport

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When not in use, **Bladeskyn®** should be stored under normal conditions of 16°C to 27°C and has a shelf life of 12 months when stored at 20°C 50% R.H.

To obtain best performance, use the product within this time from the date of manufacture.

The product should not be frozen.

**Bladeskyn®** should be transported in its original packaging to minimise damage.

## Substrate preparation

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Blade Dynamics recommends lightly abrading any composite surface with P120 grade grit to achieve maximum adhesion between the composite surface and **Bladeskyn®**.

The abraded surface should be wiped down and cleaned with a solution of water, isopropyl and detergent to remove loose particles.

The surface should be clean and dry before progressing to **Bladeskyn®** application.

A wet application method is the recommended method for applying **Bladeskyn®** to a composite surface.

A solution of water, isopropyl and detergent should again be used to maintain a wet surface prior to applying **Bladeskyn®**.

The recommended method for wetting a surface is to use a water pressure sprayer that can evenly spray over a large area.

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