Hempablade Edge 171

Product Description

Hempablade Edge 171 is a fast cure top-layer designed to provide exceptional erosion protection of the leading edge on wind turbine rotor blades.

On a wind turbine, the blade's leading edge is exposed to extremely high airflow speeds (even >300km/h). At these speeds, the impact from rain may cause significant coating erosion or even composite damage. In severe cases the erosion may lead to a loss of aerodynamic performance and a 2-3% drop in Annual Energy Production. This loss of performance and need for maintenance makes leading edge erosion one of the wind industry's most significant maintenance cost and performance challenges.

Recommended Use: Hempablade Edge 171 is recommended as the final top-layer applied during the blade factory coating application process. A fast-curing solution and therefore suitable when high productivity is key.

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Recommended layers	2- layers for factory application
Number of components:	2k (Base + Curing agent)
Colour:	Light Grey 11150 RAL 7035
Dry film thickness:	Low: 150 microns [5.9 mils] High: 200 microns [7.9 mils] Recommended: 175 microns [6.9 mils]
Volume solids, %:	100 %
Mixing:	1:1 by volume, supplied in cartridges
Application:	Roller + Brush
Pot life:	12 minutes at 20°C [68°F]
VOC content:	9 g/L [0.08 lb/US gal]
Application window:	5-35°C [40-95°F] and RH 30-85%
Packaging	400 ml cartridges
Consumption	400 ml = App 3 meter of application for a two- layer system.

The physical constants stated are nominal data according to the Hempel Group's approved formulas. They are subject to normal manufacturing tolerances. This product should be used with reference to the Technical Specifications.

Typical uses

Onshore, Offshore, for new blades coated in factory environments. Hempablade Edge 171 is a top-layer coating which provides exceptional protection against rain erosion, reducing blade maintenance cost and maintaining the blade aerodynamic integrity. When applied as the recommended two-layer system, Hempablade Edge 171 offers best in class protection against erosion.
As an easy-to-apply, fast-cure system, Hempablade Edge 171 is particularly suitable when high application productivity is needed.

Key features

- Superior protection performance (RET)
- DNV-GL RP-0171 compliant
- Fast and simple manual application with roller & brush
- Low coating thickness equals low consumption
- Optimized application process and low coating thickness to reduce potential AEP loss
- Has undergone over 1000x Rain Erosion Tests (RET) sessions at Hempel's RET facility
- Strong UV resistance

Detailed application/work instructions are provided to support the application process. Guideline video is available to support follow-up training.
Since 2019, Hempel has used in-house Rain Erosion Test facilities to optimize the product development and LEP validation process.
For more information, please contact Hempel at blades@hempel.com