

How Long Will Your Rotor Blade Coatings Last?



The Wind Turbine Challenge – These are the Facts:

- ✦ Wind Turbines are installed in some of the harshest climates on earth, ranging from tropical to arctic offshore
- ✦ Smooth rotor blade surfaces are key to wind turbines efficient performance
- ✦ Utilizing the best materials and components helps to reduce the wind turbines maintenance and downtime and increases their long-term efficiency
- ✦ Rotor blade coatings are multi-functional. They must possess an array of characteristics including:
 - Smooth and aerodynamic surface
 - Repels ice and mold
 - Resists rain and hail erosion
 - Avoids radar interference
- ✦ The coatings functionalities have to be maintained even under the influence of salt water, sunlight and wide ranging temperatures
- ✦ Weathering testing is critical to selecting the right materials and components for wind turbines to avoid premature failure and expensive downtimes
- ✦ Only full-spectrum solar simulation offered by Xenon Arc devices will realistically trigger all photo-degradation mechanisms

Atlas' Solution

Weathering Testing for Rotor Blade Coatings and Materials Used in Wind Engines

Atlas Xenon Arc Instruments: Weather-Ometer®, Xenotest®, SUNTEST®

These instruments provide realistic solar simulation to determine the long-term effects of sunlight, heat and moisture on the efficiency and functionality of rotor blade coatings.

- Choose the best instruments to meet your needs:
- testing according to ISO 16474-2:2013
 - exposure areas of up to 11000 cm²
 - small, economical table-top instruments
 - high irradiance instruments to decrease testing time
 - flatbed instruments ideal for testing 3-D specimens

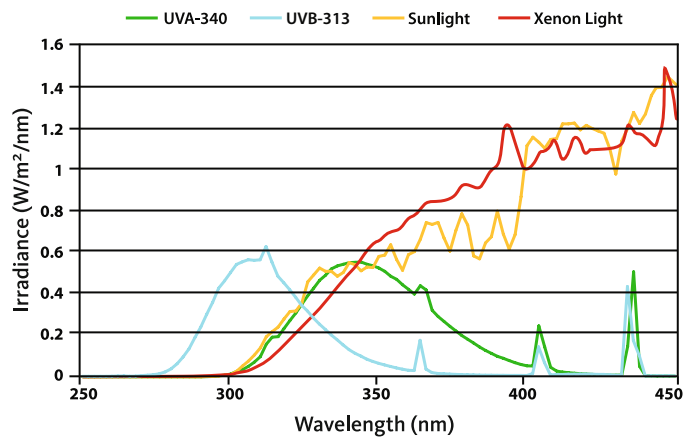


Atlas UVTest



Economical weathering testing (ISO 6474-3:2013) with improved test reproducibility and lower operating costs for testing materials for their reaction to UV, temperature and moisture.

Atlas UV Lamps and filtered Xenon Arc Compared to Sunlight (Control Wavelength Normalized at 0.55 W/m²)



Offshore Coatings

The SUNTEST XLS+ offers a special advantage – a salt water resistant immersion unit. This unique accessory allows for simultaneous exposure to saltwater and solar radiation ideal for testing any coating used in marine environments.



Atlas also offers solar environmental chambers for testing larger samples as well as outdoor testing services in tropical, arid, cold and corrosive climates. For a full overview of our weathering products and services, please visit our website at www.atlas-mts.com or send us an email at atlas.info@ametek.com.