Advanced Corrosion Protection

(ASTM B117 Tested)

Objective - Assess the protective capabilities of Nylok NyShield® against corrosive environments

Design - M10 Fasteners installed in carbon fiber and magnesium panels, then exposed to neutral salt spray per **ASTM B117**

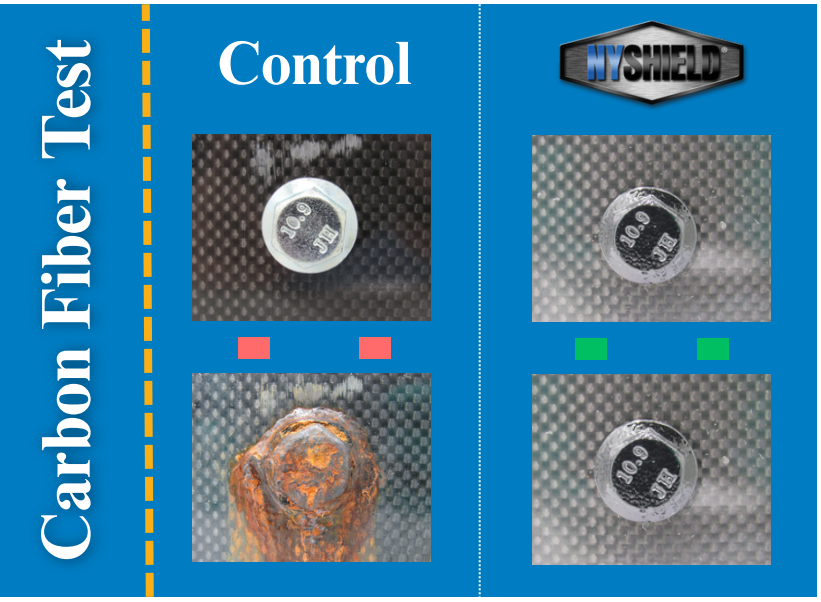
Conclusion - Nylok NyShield® protects steel fasteners from corrosion in the harshest environments

Magnesium Test

Implications

- Fasteners without NyShield® were **corroded entirely**
- NyShield® coated fasteners led to a **significant corrosion reduction** on the surrounding magnesium surface
- NyShield® limits corrosion at critical fastening locations, **upholding assembly reliability and functionality**

Carbon Fiber Test



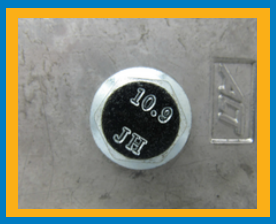
Implications

- Fasteners without NyShield® experienced **extreme corrosion and rusting**
- NyShield® coated fasteners were **minimally affected** by salt spray after the 1000 hours
- NyShield® coated fasteners **thrive in highly corrosive environments**, remaining secure and reliable

Magnesium Corrosion Test

Control - Electroplated Zinc Plating

- Starting point
- No rust or corrosion present
- Fastener entirely secure



Beginning of Test

- Starting point
- No rust or corrosion present
- Fastener entirely secure

- Rust beginning to form
- Inital signs of corrosion around fastener

456 Hours of Exposure

- No fastener rust or corrosion
- Fastener still secure

- Corrosion around fastener deteriorated test plate
- Mating surface gone, fastener detached

816 Hours of Exposure

- No presence of rust/corrosion
- Fastener still secure

- Increase in corrosion
- No fastener present

End of Test (1000hrs)

- No presence of rust/corrosion
- Fastener entirely secure

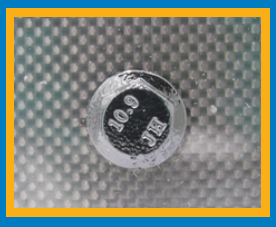
Carbon Fiber Corrosion Test

Control - Electroplated Zinc Plating

NYSHIELD®

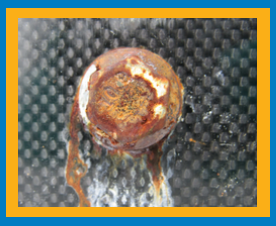
- Starting point
- No rust or corrosion present
- Fastener entirely secure

Beginning of Test

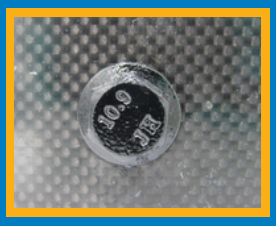


- Starting point
- No rust or corrosion present
- Fastener entirely secure

- Noticeable rust and rust runoff
- Initial signs of fastener corrosion

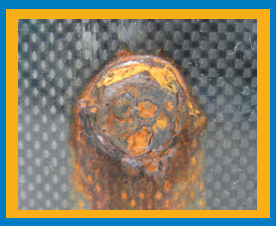


240 Hours of Exposure

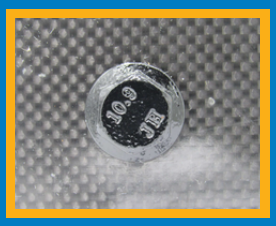


- No fastener rust or corrosion
- Fastener entirely secure

- Heavy amounts of rust/corrosion
- Fastener security likely weakened



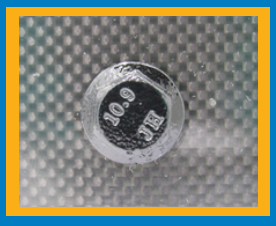
600 Hours of Exposure



- No fastener rust or corrosion
- Fastener entirely secure

- Fastener entirely rusted
- Fastener security compromised

End of Test (1000hrs)



- No fastener rust or corrosion
- Fastener entirely secure