York’s E-Fin coating is a flexible epoxy polymer coating process engineered specifically for HVAC heat transfer coils. ElectroFin® uses a PPG POWERCRON® e-coat formulation specifically designed to provide excellent edge coverage of fins with a unique polymer that controls the flow characteristics of the coating, a process that can provide 100% coil coverage without bridging. E-Fin coating is available on many of York’s coil designs including aluminum microchannel coils, conventional copper tube coils with standard and enhanced aluminum fin designs.

York’s heating and air conditioning products are designed with reliability and durability in mind; however in the harshest conditions such as the sea coast, process paper mills, chemical factories and other corrosive environments added protection such as York’s E-Fin coil coating is a must.

Benefits of York’s Electrocoating Process:

- Exceptional flexibility and durability - ElectroFin adhesion properties and flexibility of the coating material provides excellent coil coverage and corrosion resistance.
- Not only does the ElectroFin coating provide excellent seacoast, salt environment protection it provides outstanding protection in acidic and alkaline environments ranging from 3.0-12.0 pH levels.
- ElectroFin coating is designed to protect the coil with less than 1% thermal performance degradation so unlike many other types of coil coatings, E-Fin protects the products heat transfer coils without an adverse effect on cooling or heat pump performance.
- ElectroFin coated coils have been tested and passed ASTM B-117 Salt Spray tests exceeding 6000 hours.
- Excellent corrosion and UV resistance.
- York UPG’s HVAC products are not only built in the U.S.A., but E-Fin is also a domestically applied product.
- A 5 year unit replacement guarantee including labor is available on select residential products if the coil fails due to corrosion.*

After 1000 Hour Salt Spray Test

The proof is in the extensive salt spray testing. The photographs shown to the left are real world applications that show a heat transfer coil untreated and treated with ElectroFin protective coating after many thousands of hours in an salty environment.

*Unit must be registered online within 90 days of installation otherwise the parts warranty reverts back to a 5-year limited parts warranty.
Technical Performance

Electrocoating Process

Electrocoating is the process by which a metallic work piece (coil) is submerged in a paint/water bath where electricity is used to deposit paint onto it.

Thermal Performance After 1000 Hour Test

The chart at left shows less than a 1% thermal performance impact between an uncoated and E-Fin coated coil when first applied. After 1000 hours of salt spray testing the E-Fin coil still performs at 90+% whereas the uncoated coil performance has dropped below 60%. A clear indication of how York’s E-Fin helps retain the products performance in harsh conditions.

With York’s E-Fin coil coatings customers can realize extended products coil life and continued performance from the product; whereas other manufacturer’s products with uncoated coils begin deteriorating in both coil surface area and performance within a short period of time.

York’s E-Fin meets these test standards

Specifications

Coil will have a flexible epoxy polymer e-coat uniformly applied to all coil surface areas with no material bridging between fins. The coating process will ensure complete coil encapsulation and a uniform dry film thickness from 0.6 – 1.2 mils on all surface areas including fin edges and meet 5B rating cross-hatch adhesion per ASTM B3359-93. Corrosion durability will be confirmed through testing to no less than 5,000 hours salt spray resistance per ASTM B117-90 using scribed aluminum test coupons.

York’s E-Fin coil coatings are chemically resistant to the following chemicals at AMBIENT temperatures.

NR = Not Recommended

ElectroFin® is not intended for liquid to liquid (immersion) applications. Elevated temperatures can have an adverse effect on the corrosion durability of ElectroFin, depending on the specific environment. This table is to be used as a GUIDE for general reference. For specific corrosion resistance durability, please contact your York representative to discuss your individual application.