

Data Sheet

GENERAL DESCRIPTION
– SUBJECT TO CHANGES OR DEVIATIONS

Insitu® Spray-Applied, Anti-corrosion Coil and Cabinet Coating

Product description

Insitu is a water-based and water-reducible synthetic flexible polymer anti-corrosion coating specifically designed for the protection of HVAC/R coils and components. Insitu is formulated with ES² (embedded stainless steel) pigment to improve adhesion, moisture resistance and corrosion durability. The product is applied at our facilities or on-site at your premises after HVAC/R units have been manufactured.

Specifications

Heat exchanger (HX) coils, cabinets and optional internal HVAC components shall have a water-based synthetic polymer coating with ES² pigment spray-applied with no material bridging between fins. The spray coating process will ensure a uniform dry film thickness of 15-25 µm (0.6-1.2 mils) and meet 0 (5B) rating crosshatch adhesion per ASTM D3359-93. Corrosion durability will be confirmed through testing to no less than 5,000 hours salt spray resistance per DIN 53167 (ASTM B117) using scribed aluminum test coupons.

Applications Ideally Suited for Insitu

- Heat exchanger coils (water, condenser, evaporator, DX)
- Mini-splits
- Packaged Rooftops
- Condensing Units
- Modular Air-handlers
- Air-cooled Chillers
- Interior & exterior HVAC cabinetry and copper piping

Technical Properties

Property	Test Method	Performance
Salt Spray	DIN 53167 / ASTM B117	Exceeds 5,000 hours
Water Immersion	ASTM D870	>1,000 hours
Pencil Hardness	ASTM D3363	HB-F
Cross Hatch Adhesion	ASTM D3359	0 (5B)
Humidity	ASTM D1735	1,000 hours minimum
UV Resistance	ASTM D4587	1,000 hours
Mandrel Bend (Flexibility)	ASTM D522	Pass – 3,175 mm (0.125 inch)
Mold Resistance	ASTM G21	Pass
Sand & Dust Resistance	MIL-STD 810F	Pass

Resistance to:

Thermal Loss

ES² pigments are made from a high-performance stainless alloy and resistant to corrosive conditions. ES2 pigments are therefore suitable for even the most corrosive environments and will maintain their appearance after many years exposure.

UV Degradation

ES² pigments form a multi-layer structure throughout the paint film. This creates a barrier layer which reflects sunlight away from the paint film preventing ultraviolet rays from penetrating. As a result, UV degradation of individual polymer molecules is eliminated, the film integrity is maintained, and the pigment particles are well anchored to the substrate. The resultant smooth, hard finish stops dirt from accumulating.

Moisture

The multi-layer structure of the ES2 pigments slows the passage of water molecules into the film and acts as an effective moisture barrier. This prevents subsequent swelling and deterioration of the protective film.

