



## TECHNICAL DATA SHEET

GENERAL DESCRIPTION  
– SUBJECT TO CHANGES OR DEVIATIONS

### Insitu<sup>®</sup> Spray Coat ES<sup>2</sup> Spray-Applied, Anti-Corrosion Coil and Cabinet Coating

#### PRODUCT DESCRIPTION

Insitu<sup>®</sup> Spray Coat ES<sup>2</sup> 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<sup>®</sup> Spray Coat ES<sup>2</sup> is formulated with (embedded stainless steel) pigments to improve adhesion, moisture resistance UV protection 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 ES<sup>2</sup> pigment spray-applied with no material bridging between fins. The spray coating process will ensure a uniform dry film thickness of 15-30 µm (0.6-1.2 mils) and meet 5B rating crosshatch adhesion per ASTM D3359. Corrosion durability will be confirmed through testing to no less than 10,000 hours salt spray resistance per C5-I and DIN 53167 (ASTM B117) using aluminum test coupons.

#### APPLICATIONS IDEALLY SUITED FOR INSITU<sup>®</sup> SPRAY COAT

- 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 10,000 hours
Water Immersion	ASTM D870	500 hours minimum
Pencil Hardness	ASTM D3363	HB-F
Cross Hatch Adhesion	ASTM D3359	5B
Humidity	ASTM D2247	500 hours minimum
UV Resistance	ASTM D4587	500 hours minimum
Mandrel Bend (Flexibility)	ASTM D522M	Pass
Mold Resistance	ASTM G21	Pass
C5-I Continuous Condensation	ISO 6270	Pass
C5-I Salt Spray	ISO 7523	Pass
C5-I Chemical Resistance	ISO 2812-1	Pass

## RESISTANCE TO:

### CORROSION RESISTANCE

ES<sup>2</sup> pigments are made from a high-performance stainless alloy and resistant to corrosive conditions. ES<sup>2</sup> pigments are therefore suitable for even the most corrosive environments and will maintain their appearance after many years exposure. ES<sup>2</sup> pigments help to reduce the effect of thermal loss / degradation by enhancing heat transfer thru the coating. Typical transfer loss is  $\leq$  1%.

### UV DEGRADATION

ES<sup>2</sup> 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 ES<sup>2</sup> 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.