



King Luminaire • StressCrete • Est. 1953

**STRESSCRETE  
GROUP**

## King Luminaire Specification - Kingcoat Powder Coating

### ***SuperDurable Polyester Powder Coating***

#### ***Description:***

*SuperDurable Polyester TGIC Powder Coating offers excellent film appearance as well as superior mechanical and outdoor exposure qualities, in addition to outstanding overbake resistance through a broad range of cure conditions.*

#### ***Advantages:***

- Provides excellent consistent finish
- Superior outdoor exposure qualities
- Offers a wide range of application and film build characteristics
- Available in various gloss and textured finishes
- Reduces loss of gloss due to UV exposure

#### ***Performance Tests: (For Smooth Films Only)***

*Testing performed on Bonderite 1000 panels electrostatically applied and properly cured in an electric convection oven Gloss Hatch Adhesion*

ASTM D3359	<i>Excellent Salt Spray Test</i>
ASTM B117	<i>1,000 hours + Humidity</i>
ASTM D2247	<i>100 degrees Fahrenheit, 100% RH</i>
ASTM D1737	<i>1,000 hours + Conical Mandrel To 180 degrees, 1/8" Mandrel Impact Resistance, Direct</i>
ASTM D2794	<i>Up to 160 in lb Pencil Hardness</i>
ASTM D3363	<i>II Plus</i>

#### ***Characteristics:***

**Gloss:** 50 to 100 units  
**King Standard:** 50 gloss units

**Specific Gravity:**  
ASTM D792 1.2 to 1.8

**Recommended Film Thickness:**  
Mils 1.5 to 4.0

### ***SPECIFICATIONS***

#### ***Step 1***

Clean – 1-2 minutes at 140F-160F  
Applied as a spray to remove dirt, oil and grease

#### ***Step 2***

Rinse – 30 seconds – 2 minutes at ambient temp.  
Rinse of cleaner

#### ***Step 3***

Phosphate (iron) – 1-2 minutes at 140F-170F  
Conversion coating also sprayed on to prepare surface for paint adhesion

#### ***Step 4***

Water rinse – 30 seconds – 2 minutes at ambient

#### ***Step 5***

Seal rinse – 30 seconds – 2 minutes at ambient  
Seals conversion coat to maximize salt spray test

#### ***Step 6***

R.O. Rinse – 30 seconds – 2 minutes at ambient  
Rinse off solids.

#### ***Step 7***

Final R.O. Rinse with virgin water.  
Pass through at ambient

#### ***Please Note:***

*Steps 1-6 all use recirculated products and water.  
Misting nozzles between each stage to prevent Pre-drying or rust*

### ***TOP COAT***

#### ***Step 8***

Dry off 10 minutes at 300 – 325F  
Convection dry- off oven (gas fired)

#### ***Step 9***

Cool down – 11 minutes at ambient

#### ***Step 10***

Powder coat  
Electrostatically applied in temp and humidity controlled environmental room.

#### ***Step 11***

Oven cure – 20 minutes at 375 – 400F  
Conveyorized convection over (gas)

#### ***Step 12***

Cool down – 2 minutes at ambient

#### ***Step 13***

Force cool – 5 minutes at ambient