## Powder Coating Technical Data

**Certified PCI 4000 A2 (AAMA 2604) & A3 (AAMA 2605)**

**Architectural Grade Powder Coating**

**Certified PCI 4000 A2 (AAMA 2604) compliant.**

- Regis®, CourtYard®,
- Westbury®, ScreenRail,
- Designer Fencing, Magena Star®,
- DSI Columns® and Aluminum CHR

**Certified PCI 4000 A3 (AAMA 2605) compliant.**

- Regis®, CourtYard®,
- Westbury®, ScreenRail,
- Designer Fencing, Magena Star®,
- DSI Columns® and Aluminum CHR

### American Architectural Manufacturers Association (AAMA) Performance Requirements For Pigmented Organic Coatings Defined.

<table>
<thead>
<tr>
<th>AAMA Tests</th>
<th>TYPICAL Polyester</th>
<th>AAMA 2603</th>
<th>AAMA 2604</th>
<th>AAMA 2605</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dry Film Hardness</td>
<td>No test</td>
<td>No test</td>
<td>No coating rupture</td>
<td>No coating rupture</td>
</tr>
<tr>
<td>• Dry Adhesion</td>
<td>No test</td>
<td>10% coating removal</td>
<td>No coating removal</td>
<td>No coating removal</td>
</tr>
<tr>
<td>• Wet Adhesion</td>
<td>No test</td>
<td>10% coating removal</td>
<td>No coating removal</td>
<td>No coating removal</td>
</tr>
<tr>
<td>• Boiling Water Adhesion</td>
<td>No test</td>
<td>No test</td>
<td>No coating removal</td>
<td>No coating removal</td>
</tr>
<tr>
<td>• Impact Resistance</td>
<td>No test</td>
<td>No test</td>
<td>No coating removal</td>
<td>No coating removal</td>
</tr>
<tr>
<td>• Abrasion Resistance</td>
<td>No test</td>
<td>No test</td>
<td>ACV 20 minimum *</td>
<td>ACV 40 minimum *</td>
</tr>
<tr>
<td>• Muriatic Acid Resistance</td>
<td>No test</td>
<td>No visual change</td>
<td>No visual change</td>
<td>No visual change</td>
</tr>
<tr>
<td>• Mortar Resistance</td>
<td>No test</td>
<td>No visual change</td>
<td>No visual change</td>
<td>No visual change</td>
</tr>
<tr>
<td>• Nitric Acid</td>
<td>No test</td>
<td>No test</td>
<td>5AE max. change</td>
<td>5AE max. change</td>
</tr>
<tr>
<td>• Detergent Resistance</td>
<td>No test</td>
<td>No visual change</td>
<td>No visual change</td>
<td>No visual change</td>
</tr>
<tr>
<td>• Window Cleaner Resistance</td>
<td>No test</td>
<td>No test</td>
<td>No visual change</td>
<td>No visual change</td>
</tr>
<tr>
<td>• Humidity Resistance</td>
<td>No test</td>
<td>1500 hours</td>
<td>3000 hours **</td>
<td>4000 hours</td>
</tr>
<tr>
<td>• Salt Spray Resistance</td>
<td>No test</td>
<td>1500 hours **</td>
<td>3000 hours **</td>
<td>No Test</td>
</tr>
<tr>
<td>• Cyclic Corrosion Testing</td>
<td>No test</td>
<td>No test</td>
<td>No test</td>
<td>2000 hours **</td>
</tr>
<tr>
<td>• Color Retention (S. FL)</td>
<td>No test</td>
<td>1 year minimum fade</td>
<td>5 years max. 5AE change</td>
<td>10 years max. 5AE change</td>
</tr>
<tr>
<td>• Gloss Retention</td>
<td>No test</td>
<td>No test</td>
<td>5 year 30% retention</td>
<td>10 year 50% retention</td>
</tr>
</tbody>
</table>

* * Abrasion Coefficient Value ** 0” to 1/16” creepage from scribe is passing
**QUV Accelerated Weathering Tester**
Fluorescent lamps, moisture, and heat provide weathering simulation at an estimated rate of 1000 hours = 1 year per QUV documentation.

**L, a, b Color Scale**
- **L VALUE**
  - Black = 0
  - Gray = 50
  - White = 100
- **a VALUE**
  - + value = red*
  - < 0 >
  - - value = green*
- **b VALUE**
  - + value = yellow*
  - < 0 >
  - - value = blue*
  - * The larger the +/- number... the deeper the color.

**Gloss Tester**
Measures the gloss level of coating.

**Color Spectrometer**
Measures color value per L.a.b. scale shown.
The powder coating application booth produces zero VOC emissions. Powder is stored and applied in a climate controlled positive pressure environmental room. Ten pre-treat system titration checks twice per shift maintain system parameters and ten QC checks are completed every hour on product coming off the powder-coating line. Parts are not touched by human hands during the pre-treat, dry-off, application and cure process to maintain ultimate cleanliness of powder-coated parts.

DSI is a PCI 4000 certified and verified AAMA 2604 and AAMA 2605 compliant powder coating applicator. The powder coating process is accredited by the American Architectural Manufacturing Association and the Powder Coating Institute. Our powder coating is custom blended from a Super Durable Polyester TGIC (Triglycidyl Isocyanurate) resin-base, using premium pigmentation to meet AAMA 2604 specifications. Our AAMA 2605 is a fluorocarbon polymer resin system.
We have tried to make this catalog comprehensive and factual. We reserve the right to discontinue at any time, without notice, colors, materials, equipment and availability. Since some information may have been updated since the time of printing, we are not responsible for typographical or pictorial errors. Materials shown may vary slightly from actual colors. ©Digger Specialties 2016 SP02/16 99647

### Coating Thickness Test
Coating thickness is measured and plotted every hour.

### ASTM D3359 Crosshatch Test
Hourly crosshatch testing is completed per ASTM D3359 to test coating adhesion.

### PCI#8 Solvent Cure Test
Solvent testing per PCI#8 is completed hourly to test for complete cure.

### System Titration Test
Ph levels are checked twice per shift as part of the pretreatment titration check.

### Cure Oven Temperature Test
Cure oven air temperatures and part temperatures, during the cure process, are monitored frequently to ensure proper curing of powder coating.

### Automated Chemical Test
Pretreatment chemicals are monitored and added automatically but titration is checked manually twice per shift.