SERIES 49 - fine and rough textured
POLYESTER TGIC WEATHER RESISTANT POWDER COATING FOR INTERIOR AND EXTERIOR APPLICATIONS

Typical applications
- residential windows and doors
- lawn mowers and garden equipment
- patio furniture
- automotive accessories
- bicycles and motorcycles
- agricultural machinery
- sporting goods
- internal ship components

Features
- good weather resistance
- good mechanical properties
- good flow
- good coverage
- good storage stability
- can be formulated in Out Gassing Forgiving (OGF) formulation
- Underwriter Laboratories recognized component (UL approved)

Pretreatment
The following table reflects the common methods of pre-treatment with regards to various substrates and applications. In selecting the proper type of pretreatment, the suitability of the type of powder coating for a desired application according to the guidelines on this page should be observed.

<table>
<thead>
<tr>
<th>Metal Type</th>
<th>Aluminum</th>
<th>Galvanized Steel</th>
<th>Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degreasing</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>1) Chromating</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>≥ 2) Pre-Anodizing</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2) Chrome free</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Iron Phosphating</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Zinc Phosphating</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Blasting</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>≥ 3) Sweeping</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Application:
I = interior; E = exterior; A = architectural; S = steel
1) according to ASTM B 449
2) according to GSB quality and test regulations. The suitability of this type of pretreatment needs to be established through a boiling water test and subsequent cross-hatch adhesion and adhesive tape removal test
3) only for zinc coated parts >1.8 mils (>45 μm)
4) for a two-coat process/TIGER Shield

Processing
Corona and Tribostatic*
* For Tribostatic powder coatings, confirm before ordering. Suitability of metallic effects for Tribostatic processing must be verified prior to actual application. Please refer to the latest edition of the relevant application guidelines for metallic effect powder coatings.

Since not all powder coatings are suitable for recycling/reclaim, please verify before ordering.

Finish

<table>
<thead>
<tr>
<th>finish</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>fine texture matte</td>
<td>visual</td>
</tr>
<tr>
<td>rough texture matte</td>
<td>visual</td>
</tr>
<tr>
<td>rough texture glossy</td>
<td>visual</td>
</tr>
</tbody>
</table>

* Gloss level assessed visually.

Available as stock product in a selection of colors and finishes (see color charts). It can be made to order in other colors (minimum order quantity applies).
Cure parameters
(substrate temperature versus curing time)

Cure parameters must be closely observed since mechanical properties will develop before full cross-linking.

Test results

Checked under laboratory conditions on iron phosphated steel test panels Bonderite B-1000 or equivalent. Cure conditions are according to the cure curves. Actual product performance may vary due to product-specific properties such as gloss, color, effect and finish as well as application-related and environmental influences. When used as a two-coat system, the increase in film thickness will result in a decrease of mechanical properties.

<table>
<thead>
<tr>
<th>Test method</th>
<th>Test</th>
<th>Series 49 fine texture matte</th>
<th>Series 49 rough texture glossy</th>
<th>Series 49 rough texture matte</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 2360</td>
<td>recommended film thickness</td>
<td>3-4 mils (70-100 µm)</td>
<td>3.5-4.5 mils (90-110 µm)</td>
<td>3.5-4.5 mils (90-110 µm)</td>
</tr>
<tr>
<td>ASTM D523</td>
<td>gloss - 60°</td>
<td>0-15</td>
<td>&gt;15</td>
<td>&lt;15</td>
</tr>
<tr>
<td>ASTM D3359 method B</td>
<td>cross cut tape test</td>
<td>5B</td>
<td>5B</td>
<td>5B</td>
</tr>
<tr>
<td>ASTM D522</td>
<td>mandrel bending test</td>
<td>≤3/16 inch (≤5 mm)</td>
<td>≤3/16 inch (≤5 mm)</td>
<td>≤3/16 inch (≤5 mm)</td>
</tr>
<tr>
<td>ASTM D2794</td>
<td>ball impact test</td>
<td>80 in/lb, no appearance of cracks down to the substrate</td>
<td>80 in/lb, no appearance of cracks down to the substrate</td>
<td>80 in/lb, no appearance of cracks down to the substrate</td>
</tr>
<tr>
<td>ASTM D3363</td>
<td>pencil hardness</td>
<td>2H minimum</td>
<td>2H minimum</td>
<td>2H minimum</td>
</tr>
<tr>
<td>ASTM D2247</td>
<td>determination of resistance to humidity</td>
<td>maximum undercutting 1/8 inch (3 mm), no blistering</td>
<td>maximum undercutting 1/8 inch (3 mm), no blistering</td>
<td>maximum undercutting 1/8 inch (3 mm), no blistering</td>
</tr>
<tr>
<td>ASTM B117</td>
<td>salt spray resistance</td>
<td>maximum undercutting 1/8 inch (3 mm), no blistering</td>
<td>maximum undercutting 1/8 inch (3 mm), no blistering</td>
<td>maximum undercutting 1/8 inch (3 mm), no blistering</td>
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</table>

Cleaning recommendations: refer to the latest edition of TIGER “Cleaning Recommendations” information sheet, Version 00-1005.
Please note

For metallic finishes, it is recommended to observe the guidelines published in the latest edition of TIGER Drylac® “Application guidelines for metallic effect powder coatings”.

Please consult the manufacturer before applying any 2-coat systems that feature (i) a primer or e-coat as base coat and (ii) a metallic effect powder coating as a top coat.

Top coating with a clear exterior grade powder coating over an interior grade powder coating does not result into a weather resistant coating system.

Post-bending properties of any part must be verified prior to application. Minor cracks in the coated surface may lead to corrosion.

Joint sealants and any other auxiliary products, such as glazing aids, gliding waxes, drilling and cutting lubricants, which come in contact with the coated surface, must be pH-neutral and free of substances that may damage the finish. Therefore, a suitability test at the applicator’s end, prior to coating, is highly recommended.

In general, colors in the red, orange and yellow range may require an increased film thickness to achieve full hiding.

Please read and understand the Safety Data Sheet (SDS) before use.

Chemical resistance

The required chemical resistance of a powder coating depends, among other things, on its formulation. Chemical resistance requirements must be considered according to processing conditions and final use of the finished product. This is best established during the product specification process. Agreement between all parties involved must be reached about the requirements for such chemical resistance as well as the test method, which may be performed in accordance with PCI test method #8 “Solvent Cure Test”. Furthermore, the test duration and concentration of the test media need to be agreed upon.

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