SermeTel®
Process 5380 DP™
Coating System

PRODUCT DESCRIPTION
SermeTel Process 5380 DP (Dense Pack) consists of a closely packed aluminum-filled chromate/phosphate basecoat, sealed with a chemically inert chromate phosphate topcoat. The coating provides excellent protection to stainless steel and ferrous alloys, and will operate at temperatures up to 1200°F (650°C).

ADVANTAGES
Process 5380 DP should be used on any component where serious concerns are corrosion/erosion protection, tight tolerances, surface finish, or where the potential for media entrapment is possible due to part configuration. On dimensionally critical surfaces, precision coating thicknesses of as thin as 0.3 mils (7.5μm) can be achieved.

The main features are:
• Does not require media finishing to achieve final surface finish
• Compressibility supports mating surfaces
• Excellent corrosion resistance
• Excellent surface finish

APPLICATIONS
The aerodynamic finish of Process 5380 DP makes it ideal for any gas path turbine component, such as compressor blades, vane and shroud assemblies, and diffusers. Similar SermeTel topcoated systems have seen millions of hours of successful service in military, commercial aviation and industrial turbines.

SPECIFICATIONS
FLIGHT TURBINE:
- Pratt Whitney Aircraft PWA 110-21/-9
- Pratt Whitney Canada CPW 420
GROUND TURBINE:
- Westinghouse 83342NU
- Dresser Rand 015-009-022
- Solar ES59-263 Type B
- Type C
- European Gas Turbines 525202

Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Thickness</td>
<td>0.3 to 5.0 mils (7.5 to 127 μm), typically 1.5 mils (37.5 μm)</td>
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<tr>
<td>Surface</td>
<td>≤ 10 μinches @ .010&quot;</td>
</tr>
<tr>
<td>Profile Cutoff</td>
<td>.25 μm @ 0.3 mm</td>
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<tr>
<td>Profile Cutoff</td>
<td>≤ 25 μinch @ .030&quot; cutoff on new IGT gas path surfaces (.63 μm @ 0.8 mm)</td>
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Performance Data

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
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<tbody>
<tr>
<td>Salt Spray (ASTM B117)</td>
<td>No red rust on panels after 2500 hours of testing</td>
</tr>
<tr>
<td>Abrasion Resistance (ASTM D968)</td>
<td>&gt;300 liters/mil</td>
</tr>
<tr>
<td>Tensile Bond Strength (ASTM C633)</td>
<td>≥ 8,000 psi (70 MPa) strain rate: 0.1 inch per minute</td>
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SermeTel 5380 DP is covered by US Patents 4,537,632; 4,606,927 and foreign patents.

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