**Coating Service Solutions**

*Metco COATINGS*

*Systematic coating solutions*

Thermal spray coatings for:
- Hydraulic piston rods
- Rams and plungers
- Compressor piston rods

The optimal solution for your application!

Coating solution features:
- High wear resistance tailored for the application
- Chemically resistant for use in the presence of corrosive gases
- Resistant to corrosive environments
- Optimal surface structure with good frictional characteristics between the piston rod and the seal
- Coating ductility reduces the risk of cracking if flexed
- Resistant to stress loading

Compared to traditional hard chromium plating, our coatings are characterized by:
- Significantly higher wear resistance
- Shorter processing times
- Thicker layers can be applied to repair worn components
- No hydrogen embrittlement of high-strength steels
- More eco-friendly which reduces processing costs
### Metco Coatings for rods, pistons, rams and related applications

<table>
<thead>
<tr>
<th>Coating</th>
<th>Coating material</th>
<th>Hardness HV0.3</th>
<th>Wear resistance a</th>
<th>Corrosion resistance a, b</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metco 2600</td>
<td>Tungsten Carbide WC/CoCr</td>
<td>1200</td>
<td>5</td>
<td>5</td>
<td>High wear resistance</td>
</tr>
<tr>
<td>Metco 2000</td>
<td>Chromium Carbide Cr&lt;sub&gt;3&lt;/sub&gt;C&lt;sub&gt;2&lt;/sub&gt;/NiCr</td>
<td>950</td>
<td>4</td>
<td>4</td>
<td>Thicker coatings can be applied for repair applications</td>
</tr>
<tr>
<td>Metco 2360</td>
<td>Hard, Nickel-Based Alloy</td>
<td>550</td>
<td>3</td>
<td>4 d</td>
<td>Similar to hard chromium plating</td>
</tr>
<tr>
<td>Metco 3600</td>
<td>Chromium Oxide</td>
<td>1000</td>
<td>5</td>
<td>4 d</td>
<td>Wear-resistant ceramic</td>
</tr>
<tr>
<td>Metco 3250</td>
<td>Aluminium Oxide</td>
<td>800</td>
<td>3</td>
<td>4 d</td>
<td>Cost effective coating</td>
</tr>
<tr>
<td>Metco 1000</td>
<td>Chromium Steel</td>
<td>350</td>
<td>2</td>
<td>1</td>
<td>Easily repair previously uncoated components</td>
</tr>
</tbody>
</table>

- **a** Qualitative evaluation of the coating characteristics (5 = excellent; 1 = marginal improvement)
- **b** Component substrate material and the coating thickness will affect the overall corrosion resistance
- **c** Sealant suitability testing required for the specific application
- **d** With nickel-chromium intermediate layer

---

**Diagram:**

- Comparative service life of pistons used in automotive braking systems with various coatings
- Coated hydraulic ram operating in a short-cycle press for the production of laminates

Information is subject to change without prior notice.

**FLY-0043.2 – Coating Services Solutions — Metco COATINGS**
©2018 Oerlikon Metco

www.oerlikon.com/metco
info.metco@oerlikon.com