Long live your passion!

BALINIT® coatings extend the life of your classic or vintage car - with excellent wear protection and performance improvement.
The Oerlikon Balzers coating solution: It’s more economical than you might think.

Historic motorsport and classic cars today are pushing the boundaries of classic vehicle engine and transmission capabilities. With Oerlikon Balzers’ BALINIT® coatings, your vehicle can achieve greater performance by reducing frictional losses and reducing wear, thereby allowing a longer service life. As a well-known supplier to the motorsport and automotive industry for over 20 years, Oerlikon Balzers Coatings offer a surface-engineered solution for many critical components that now depend upon BALINIT® coatings. This is why the Sauber Formula 1 Team appreciates Oerlikon Balzers as an innovative partner. And, this Formula 1 technology is also ideal for your classic or vintage car.

Win longevity with wear protection and high performance.

BALINIT® coatings provide highly stressed components with excellent protection against wear and thus increase service life remarkably. But that’s not all: BALINIT® coatings provide wear reduction, for example on valve train components, which increases the engine speed and makes your classic car even more powerful.

And there’s another compelling advantage: BALINIT® coatings reduce the friction on the powertrain of your classic car, which enables enhanced load capacity and gives you that extra bit of performance.

Further applications include: ratio gears, layshafts, final drives, bearings, selector forks, followers, camshafts, rocker arms, rocker shafts, valves.
Trust in high performance.

Proven:
Less wear with BALINIT® C (WC/C).

<table>
<thead>
<tr>
<th>Wear [μm]</th>
<th>Cams: steel, uncoated</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>BALINIT® C (WC/C)</td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Nitrided uncoated</td>
</tr>
</tbody>
</table>

Auto engine test stand
Oil: without additives
Test period: 16 hours

Scenario 1
Uncoated (nitrided)
High tappet and camshaft wear

Scenario 2
BALINIT® C (WC/C) coated tappets:
Reduced wear compared with nitrided tappets and reduced counterface wear.

Also in motorcycles:
Friction reduction with BALINIT® DLC.

Motorcycle: Kawasaki Ninja
Parts coated:
Tappets: BALINIT® DLC
Wrist pins: BALINIT® C (WC/C)
Transmission: BALINIT® C (WC/C)

Power gain: 2.4 HP = 2.2 %
Increase in torque:
2.2 Nm = 3.3 % at lower speed

Remachining needless.

BALINIT® coatings are extremely thin and provide an excellent replication of contours. The edge sharpness and surface roughness of components remain virtually unchanged.

Choose high-class solutions:
BALINIT® for engine and gear components.

For highly loaded engine and gear components, primarily BALINIT® C and BALINIT® DLC are used due to their unique combination of low friction and high hardness.

<table>
<thead>
<tr>
<th></th>
<th>BALINIT® C</th>
<th>BALINIT® DLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coating material</td>
<td>a-C:H:W Metal-containing carbon coating: Tungsten diamond-like carbon (WC/C)</td>
<td>a-C:H Metal-free carbon coating: Diamond-like carbon (DLC)</td>
</tr>
<tr>
<td>Typical microhardness (HK 0.01)</td>
<td>1,000</td>
<td>&gt; 2,000</td>
</tr>
<tr>
<td>Coefficient of friction against steel (dry)*</td>
<td>0.1 - 0.2</td>
<td>0.1 - 0.2</td>
</tr>
<tr>
<td>Typical coating thickness (μm)*</td>
<td>1 - 4</td>
<td>0.5 - 3</td>
</tr>
<tr>
<td>Maximum service temperature (°C)*</td>
<td>300</td>
<td>350</td>
</tr>
<tr>
<td>Coating colour</td>
<td>Anthracite</td>
<td>Black</td>
</tr>
</tbody>
</table>

* depending on application and test conditions
The best path for your passion.

There’s much more to talk about – please get in touch to discuss what we can do to improve the longevity and performance of your vintage or classic car.

**Headquarters**
Oerlikon Balzers Coating AG  
Balzers Technology & Service Centre  
Iramali 18  
9496 Balzers  
Liechtenstein  
T +423 388 7500  
F +423 388 5419  
E components.balzers@oerlikon.com

**Germany**
Oerlikon Balzers Coating  
Germany GmbH  
Am Ockenheimer Graben 41  
D-55411 Bingen  
Germany  
T +49 672 17 93-0  
F +49 6721 2374  
E info.balzers.de@oerlikon.com

**United Kingdom**
Oerlikon Balzers Coating UK Ltd.  
Bradbourne Drive, Tilbrook,  
Milton Keynes, MK7 8AT  
Great Britain  
T +44 19 0837 72 77  
F +44 1908 361 361  
E info.balzers.uk@oerlikon.com

**USA**
Oerlikon Balzers Coating USA, Inc.  
463 Lakeshore Parkway TechPark  
Rock Hill, SC 29730  
United States  
T +1 803 329 0607  
F +1 803 366 5567  
E info.balzers.us@oerlikon.com

www.oerlikon.com/balzers