BALINIT LATUMA
Versatility wins
First-class performance in milling, drilling and turning
BALINIT LATUMA
Make your machining operations a model for success

Tool manufacturers, mechanical engineering, the aircraft industry and reconditioners can look forward to even more versatility and performance. With BALINIT® LATUMA, developed on the basis of the BALINIT® coatings FUTURA NANO and X.CEED, it offers you decisive advantages. Not only is the machining and use of a wide variety of challenging materials even more productive now, the process reliability under difficult working conditions is also increased at the same time. Employ this coating solution for indexable inserts and shank-type tools – take your metal processing business to new levels of success with BALINIT® LATUMA. Oerlikon Balzers, a global technology leader in hard coatings, helps you on the way.

Top coating properties lead to top results

<table>
<thead>
<tr>
<th>OPTIMIZED PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The latest in source technology</td>
</tr>
<tr>
<td>High aluminium content</td>
</tr>
<tr>
<td>Outstanding chemical stability</td>
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<tr>
<td>Balancing of residual stress and coating hardness</td>
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<tr>
<td>Optimized thermal shock resistance</td>
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<tr>
<td>High cutting speeds and feed rates</td>
</tr>
</tbody>
</table>

BALINIT® LATUMA
More productivity, process reliability and efficiency in machining operations

Rely on a tool coating with application versatility

**Milling and turning with indexable inserts**
- Stainless steel, HRSA
- Cast iron
- Steel

**Milling in**
- Stainless steel, HRSA
- Cast iron
- Difficult-to-machine tool steels and high-alloy steels
- High-strength, hardened steels

**Turning in**
- Stainless steel for finishing operations

**Milling with carbide and HSS end mills**

**Milling in**
- Stainless steel, HRSA
- Cast iron
- Difficult-to-machine tool steels and high-alloy steels
- High-strength, hardened steels

**Drilling with carbide and HSS drills**

**Drilling in**
- Stainless steel, HRSA
- Cast iron
- Difficult-to-machine tool steels and high-alloy steels
- High-strength, hardened steels
Convincing results with the use of BALINIT LATUMA coatings on indexable inserts and end mills

### Face milling in steel, dry

<table>
<thead>
<tr>
<th>Tool</th>
<th>Workpiece</th>
<th>Cutting data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbide insert</td>
<td>Steel 1.7225 (AISI 4140, SCM 440), 900 N/mm²</td>
<td>(v_c = 185) m/min, (f = 0.2) mm/rev, (a_v = 3) mm, (V_B = 0.15) mm</td>
<td>Oerlikon Balzers cutting laboratory</td>
</tr>
</tbody>
</table>

### Turning in stainless steel, wet and dry

<table>
<thead>
<tr>
<th>Tool</th>
<th>Workpiece</th>
<th>Cutting data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbide insert</td>
<td>Steel 1.4571 (AISI 316Ti, SUS 316Ti)</td>
<td>(v_c = 180) m/min, (f = 0.25) mm/rev, (a_v = 2) mm, (V_B = 0.25) mm</td>
<td>Oerlikon Balzers cutting laboratory</td>
</tr>
</tbody>
</table>

### Milling in hot-working steel

<table>
<thead>
<tr>
<th>Tool</th>
<th>Workpiece</th>
<th>Cutting data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbide end mill, Ø 10 mm</td>
<td>Steel 1.2344 (AISI H13, SKD61), 45 HRC</td>
<td>(v_c = 180) m/min, (f = 0.1) mm/rev, (a_v = 10) mm, (a_l = 0.5) mm, (V_B = 0.10) mm</td>
<td>Oerlikon Balzers cutting laboratory</td>
</tr>
</tbody>
</table>

### Drilling in steel

<table>
<thead>
<tr>
<th>Tool</th>
<th>Workpiece</th>
<th>Cutting data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbide drill, Ø 6,0 mm</td>
<td>Steel 1.0503 (AISI 1045, S45C)</td>
<td>(v_c = 80) m/min, (f = 0.25) mm/rev, (L_x = 4)xD, (V_B = 0.15) mm</td>
<td>Tool manufacturer</td>
</tr>
</tbody>
</table>
Reduce your tool costs with reconditioning

BALINIT® LATUMA also means: No performance losses after reconditioning. Even after multiple recoating operations, you still benefit from the same high performance as after initial coating – and you save considerably on costs. We would be pleased to provide you with information on our reconditioning services.

Amount of machined material, 100%

- 4 new tools
- 100% total costs

- 1 new tool
- Reconditioned 3 times
- 50% cost savings

Benefit from the BALINIT LATUMA high-performance coating
Contact us now!

Our worldwide coating centre network addresses are listed at: www.oerlikon.com/balzers

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