Experience BALIQ UNIQUE
Follow the Flow of Intelligence
When art meets innovation ...
BALIQ UNIQUE
Unique colouring for even more functionality

- Now you can differentiate your tools at a glance – simply assign individual colours to your tool types or tool groups.
- Choose the colours that best match your application.
- Combine top performance with a look never seen before.
- Give your tools a uniquely dazzling appearance.
- You can recognise the degree of abrasion immediately – the colour tells all.
The revolutionary smoothness of BALIQ – the premiere in colours

Exceptional precision
High precision in coating thickness distribution guarantees extremely sharp edges. Outstanding results are achieved especially with tools that have ultra-small diameters.

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What began as a technological quantum leap with our S3p® technology (Scalable Pulsed Power Plasma) and the revolutionary new BALIQ® coating generation is now taking the next innovative step.

As a result, in addition to the intelligent combination of Arc Evaporation and Sputtering, BALIQ® offers you yet another pioneering advantage:

With BALIQ® UNIQUE, colour has come into play literally for the first time. That means, you can benefit from the outstanding wear protection properties of BALIQ® UNIQUE as well as giving your tools a look that is absolutely unique.

Revolutionary smoothness
BALIQ® enables smooth chip removal and eliminates the need for mechanical post-treatment. Adhesion and built-up edges are avoided even with difficult-to-machine materials.

Excellent friction
Among other benefits, the excellent coefficient of friction of BALIQ® results in improved chip flow and reduced built-up edge formation.

High density
The density of BALIQ® coatings is very close to the greatest density theoretically possible. High toughness and high resistance to crack propagation and diffusion are salient features.

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The Art of COATING
The innovative performance of BALIQ – the premiere in colours

### BALIQ® UNIQUE convincing test results for microdrills in steel

<table>
<thead>
<tr>
<th>Tool</th>
<th>Microdrill</th>
<th>Ø 0.6 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workpiece</td>
<td>Steel 1.3505 (AISI52100, SUJ 2)</td>
<td></td>
</tr>
<tr>
<td>Cutting parameters</td>
<td>( v_c = \text{confidential} )</td>
<td>( L_c = \text{confidential} )</td>
</tr>
<tr>
<td>Source</td>
<td>Tool manufacturer / European end user</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative tool life (%)</th>
<th>End of life not attained</th>
</tr>
</thead>
<tbody>
<tr>
<td>BALIQ® TAP ALCRONOS</td>
<td>+ 400%</td>
</tr>
<tr>
<td>BALIQ® UNIQUE</td>
<td></td>
</tr>
</tbody>
</table>

### BALIQ® UNIQUE for thread forming in steel

<table>
<thead>
<tr>
<th>Tool</th>
<th>PM-HSS threat former M10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workpiece</td>
<td>Steel 1.7225 (AISI4140, SCM440) 1000 N/mm²</td>
</tr>
<tr>
<td>Cutting parameters</td>
<td>( v_c = 17.5 \text{ m/min} )</td>
</tr>
<tr>
<td>Source</td>
<td>Oerlikon Balzers Cutting Laboratory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tool life (number of threads)</th>
<th>+ 146%</th>
</tr>
</thead>
<tbody>
<tr>
<td>BALINT® A (Ionitron)</td>
<td></td>
</tr>
<tr>
<td>BALIQ® TAP ALCRONOS</td>
<td></td>
</tr>
<tr>
<td>BALIQ® UNIQUE</td>
<td></td>
</tr>
</tbody>
</table>

### BALIQ® UNIQUE for reaming of case hardening steel

<table>
<thead>
<tr>
<th>Tool</th>
<th>Reamer</th>
<th>Ø 3.0 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workpiece</td>
<td>Steel 1.7147 (AISI5120, SMnC420(H))</td>
<td></td>
</tr>
<tr>
<td>Cutting parameters</td>
<td>Confidential</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>European tool manufacturer</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative tool life (%)</th>
<th>+ 86%</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAIN (DC Sputtering)</td>
<td></td>
</tr>
<tr>
<td>BALIQ® REAM ALCRONOS</td>
<td></td>
</tr>
<tr>
<td>BALIQ® UNIQUE</td>
<td></td>
</tr>
</tbody>
</table>

All given data are approximate values, they depend on application, environment and test conditions.
Benefit from the new BALIQ UNIQUE generation
Get in touch with us today!

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