Benefit from the high-performance coatings BALINIT CROMA and BALINIT CROMA PLUS. Contact us now!

The innovative wear protection solution for more productivity and efficiency.

Our worldwide coating centre network addresses are listed at www.oerlikon.com/balzers
With BALINIT CROMA, your plastics processing will be in top form.

Whether injection molding, extrusion or blow molding: Only forming tool surfaces of the best quality ensure optimal productivity and efficiency in manufacturing processes. Take advantage of the BALINIT® CROMA and BALINIT® CROMA PLUS wear protection solutions from Cerlkon Balzers, a worldwide technological leader in the field of hard coatings. They offer you the precise advantages that are essential for reliability and success in your plastics processing.

Extremely coating hardness
High-level protection from abrasive wear
Protection from wear due to cleaning processes and tool damage

Multi-layer structure
Significantly less corrosion due to a chemically saturated, dense multi-layer structure

Low coefficient of friction
The molding materials show very good sliding behaviour on the tool surfaces

First-class surface properties
Excellent adhesion to the mold surfaces
Surfaces with low reactivity to formative media
Significant reduction of deposits enables a clean mold

Reduction of tool costs
due to longer tool service lives

Reduction of product and piece costs through decreased machine downtimes and improved tool surface quality

Reduction of maintenance costs through decreased servicing and cleaning requirements

BALINIT® CROMA and BALINIT® CROMA PLUS:
Increased productivity, economy and manufacturing process reliability

BALINIT® CROMA and BALINIT® CROMA PLUS:
提高生产力、经济性及制造工艺的稳定性

Top performance data for added value.
顶尖性能表现，提升附加价值。

BALINIT® CROMA PLUS for plastic window frames

Tool
Vacuum calibration unit  真空校准装置

Workpiece 产品
PVC window frames PVC窗扇

Challenge 挑战
Unwanted grapes (loose and stuck) cause abrasion on the edges of the vacuum grooves as well as on the flat sliding surfaces; this leads to scratches on the profile and stick-slip effects.

The solution: BALINIT® CROMA PLUS

- High-level abrasion and scratch resistance
- Increased coating service life by up to 5,000 times / 30,000 km lifetimes
- Oxide coating produces 50% better material flow
- Reduction of sticking
- Higher productivity and manufacturing process reliability

BALINIT® CROMA PLUS for plastic films

Tool
Standard tool

Workpiece 产品
HHEE packaging film HHEE包装薄膜

Challenge 挑战
Quality issues in the films due to local plastic spots sticking to the surface, abrasive cleaning causing wear and scratches, surface gets dull and rough after -1 year process

The solution: BALINIT® CROMA PLUS

- Greater production efficiency and reliability
- Significantly reduced or even eliminated sticking
- Excellent scratch protection
- No chemical interaction – no visual change of BALINIT® CROMA PLUS

Persuasive coating properties!

<table>
<thead>
<tr>
<th>BALINIT® CROMA</th>
<th>BALINIT® CROMA PLUS</th>
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</thead>
<tbody>
<tr>
<td>Microhardness (HV 0.05)</td>
<td>2.600</td>
</tr>
<tr>
<td>Coefficient of friction (dry against steel, 10 kg vertical force)</td>
<td>0.3 – 0.5</td>
</tr>
<tr>
<td>Coating thickness [μm]</td>
<td>4 – 10</td>
</tr>
<tr>
<td>Coating material / coating structure</td>
<td>CrN (multi-layer) 多层</td>
</tr>
<tr>
<td>Maximum service temperature (°C)</td>
<td>700</td>
</tr>
<tr>
<td>Coating temperature (°C)</td>
<td>250 – 450</td>
</tr>
<tr>
<td>Corrosion protection</td>
<td>++</td>
</tr>
<tr>
<td>Intrinsic roughness</td>
<td>++</td>
</tr>
<tr>
<td>Colour</td>
<td>Silver-grey 银灰色</td>
</tr>
</tbody>
</table>

Coatings also available in the DULEX series.

涂装同样也使用DULEX系列。

All data is understood to represent guideline values. Exact values are dependent on the respective substrate, the geometry and the surface finish.

所有数据仅供参考，实际根据基材、几何和表面处理情况而定。