

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

**想获益于高效涂层BALINIT CROMA和BALINIT CROMA PLUS
请尽快与我们联系！**

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**oerlikon
balzers**

HQ185EN (1504)

**oerlikon
balzers**

BALINIT CROMA: Maximum performance for plastics processing. 最大程度优化塑料加工

The innovative wear protection solution
for more productivity and efficiency.

创新的磨损保护解决方案，提高您的生产力和效率。

Plastics



With BALINIT CROMA, your plastics processing will be in top form.

通过使用BALINIT CROMA，您的塑料加工将呈现最佳状态。

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

无论是注塑模具，挤出模具还是吹塑模具：只有拥有最佳的模具表面质量，才能保证生产过程中最高的生产力和生产效率。全球超硬涂层技术领导者欧瑞康巴尔查斯，为

PLUS wear protection solutions from Oerlikon 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.

您提供表面磨损解决方案BALINIT® CROMA和 BALINIT® CROMA PLUS。这对您塑料加工过程的稳定性和成功起到至关重要的作用。

Extremely coating hardness

极端的涂层硬度

High-level protection from abrasive wear

高端耐磨防护

Protection from wear due to cleaning processes and tool damage

防止模具清洁过程造成的磨损和损坏

Multi-layer structure

多层结构

Low coefficient of friction

低摩擦系数

First-class surface properties

顶级表面性能

Reduction of tool costs due to longer tool service lives

延长工具使用寿命，从而降低工具成本

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

减少设备停工时间，改善工具表面质量，从而降低产品和单件成本

Reduction of maintenance costs through decreased servicing and cleaning requirements

减少保养和清洁的需求，从而降低维护成本

BALINIT® CROMA and BALINIT® CROMA PLUS:

Increased productivity, economy and manufacturing process reliability

BALINIT® CROMA and BALINIT® CROMA PLUS:

提高生产力、经济性和制造工艺的稳定性。

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

BALINIT® CROMA PLUS用于塑料窗框

Tool 模具

Vacuum calibration unit 真空校准装置

Workpiece 产品

PVC window frames PVC窗框

Challenge 挑战

Untreated: Glass fibres and TiO₂ cause abrasion on the edges of the vacuum grooves as well as on the flat sliding surface; this leads to scratches on the profile and stick-slip effects

未处理：玻璃纤维和TiO₂导致了真空槽边缘和滑动面的磨损；从而引起滑动面划痕和粘滑效应。

The solution: BALINIT® CROMA PLUS

- High-level abrasion and scratch resistance

- Increased coating service life by up to 6,000 miles / 9.600 kilometres

- Oxide coating produces 30% better material flow

- Reduction of sticking

- Higher productivity and manufacturing process reliability

解决方案: BALINIT® CROMA PLUS

- 高度抗磨损和划伤

- 延长涂层使用寿命达6,000英里/9,600公里

- 含氧涂层改善物料流动性30%

- 减少粘附

- 提高生产力和生产工艺稳定性

BALINIT® CROMA PLUS for plastic films

BALINIT® CROMA PLUS用于塑料薄膜

Tool 模具

Spiral mandrel die 螺旋芯棒式模头

Workpiece 产品

HDPE packaging film HDPE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 rougher after ~1 year process

局部塑胶点粘附表面从而导致质量问题，清洁导致磨损和划痕，使用一年以后表面变得暗淡，粗糙。

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

解决方案: BALINIT® CROMA PLUS

- 提高生产效率和稳定性

- 明显减少甚至避免粘附

- 抗划痕

- 没有化学相互作用-使用BALINIT® CROMA PLUS，产品外观没有视觉改变

Persuasive coating properties!

超强涂层性能！

	BALINIT® CROMA	BALINIT® CROMA PLUS
Micro hardness (HV 0.05) 维氏硬度 (HV0.05)	2,500	2,500
Coefficient of friction (dry against steel) 摩擦系数 (对钢干式)	0.3 – 0.5	0.3 – 0.5
Coating thickness (µm) 涂层厚度	4 – 10	4 – 10
Coating material / coating structure 涂层材料/涂层结构	CrN (multi-layer) 多层	CrN+OX (multi-layer with top layer) 顶层多层
Maximum service temperature (°C) 最高工作温度	700	700
Coating temperature (°C) 涂层温度	250 – 450	250 – 450
Corrosion protection 腐蚀保护	++	++
Intrinsic roughness 固有粗糙度	++	++
Colour 颜色	Silver-grey 银灰色	Rainbow 彩虹色

Coatings also available in the DUPLEX series. 涂层同时也适用DUPLEX系列。

All data is understood to represent guideline values. Exact values are dependent on the respective substrate, the geometry and the surface finish. 所有数据仅作为参考。实际值基于具体基材、几何形状和表面处理情况。