Make your products shine with BALITHERM PRIMEFORM.

The innovative and highly efficient treatment for brilliant mould surfaces.

Plastics
BALITHERM PRIMEFORM: The innovative repair effect for mould surfaces and higher productivity.

As a professional, you are aware of this problem: Mirror-polished surfaces in plastics injection moulding are very sensitive. Heavily stressed surfaces in particular are prone to wear and scratches caused by environmental effects or improper handling. Subsequent repairs or even repolishing is time-consuming and costly. That's why we developed BALITHERM® PRIMEFORM – a plasma-assisted treatment that perceptibly boosts the surface hardness of your moulds with a diffusion coating. Additionally, it prevents build-up, flaking, and embrittlement at edges.

Brilliant benefits for you:

<table>
<thead>
<tr>
<th>Wear resistance</th>
<th>Corrosion resistance</th>
<th>Scratch resistance</th>
<th>Very good polishability</th>
</tr>
</thead>
<tbody>
<tr>
<td>耐磨性</td>
<td>抗腐蚀性</td>
<td>耐擦伤性</td>
<td>良好的抛光性</td>
</tr>
<tr>
<td>Surface hardness increase to over 1400 HV</td>
<td>Greater protection against aggressive substances and condensate</td>
<td>Reduced mould sensitivity to improper handling</td>
<td>Repolishing possible without repeating the PRIMEFORM treatment</td>
</tr>
<tr>
<td>表面硬度增加到1400</td>
<td>提供良好保护，防止影响质量的有害物质和冷凝物</td>
<td>降低模具对不当处理的敏感度</td>
<td>无需经PRIMEFORM重置处理即可重新抛光</td>
</tr>
</tbody>
</table>

Reduced maintenance costs
降低维护成本
Mould repairs possible without stripping and recoating (good weldability)
模具修复时无需去除旧涂层（良好的可焊接性）

Consistently high component surface quality
良好的零件表面质量具有持续性
Preservation of mould gloss
保护模具的光泽

Efficient production
高效的产品

Steel moulds for plastics treated with BALITHERM PRIMEFORM have better properties!
经BALITHERM PRIMEFORM处理的塑料模具钢具有更好的性能！

<table>
<thead>
<tr>
<th>Steel grade</th>
<th>1.2738/1.2311/1.2312</th>
<th>1.2343/1.2344</th>
<th>1.4112/1.4122</th>
<th>1.8519/1.8550/1.7735</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P20+N/P20/P20+S</td>
<td>H11/H13</td>
<td>440B/-</td>
<td>-/-/A470</td>
</tr>
<tr>
<td></td>
<td>SKD 6/SKD 61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polishability</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Etchability</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Weldability</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Surface hardness</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>
The optimised solution for every application!

- **Automobiles:**
  - Examples: bumpers, headlights, and seat shells
  - 举例：保险杠，车头灯，座椅

- **Agricultural machinery:**
  - Examples: external parts
  - 举例：外饰部件

- **Trucks:**
  - Examples: external parts
  - 举例：外饰部件

- **Furniture:**
  - Example: plastic seats
  - 举例：塑料座椅

- **Household appliances:**
  - Examples: high-gloss fittings and fascia panels
  - 举例：高光配件和装饰面板

- **Electrical devices:**
  - Example: covers
  - 举例：外壳

- **Medical technology:**
  - Example: Reusable syringes
  - 举例：可多次使用注射器

- **Packaging industry:**
  - Example: Beverage bottles
  - 举例：饮料瓶

**A compelling advantage:**

**Problem so far:** 目前遇到的问题:
Slight corrosion in hard-to-reach places despite TiN / CrN. Scratches caused while cleaning the mould – difficult or impossible to remove. Disadvantages: Multiple stripping and recoating or new hard chrome-plating, elaborate maintenance required.
在TiN/CrN未能涉及的部位会出现轻微的腐蚀。
在模具清洗过程中产生的刮伤—很难或者不能被去除。缺点：多次底面和重涂或是新的铬镀铬，工艺复杂

**Solution:** 解决方案:
BALITHERM® PRIMEFORM. For noticeably improved demoulding, optimised process reliability, enhanced component quality.
BALITHERM® PRIMEFORM可以明显提升脱模，优化工艺的稳定性，提升零件质量

**Result:** 结果:
Improved production efficiency and reliability. Reduced scrap costs. Productivity gain in the magnitude of 60%.
提升生产效率和稳定性。减少浪费，生产率增长幅度为60%。
### Specifications

| Treatable steels | Strong steels with dimensional stability up to temperatures of 450°C, e.g. 1.2311, 1.2738, 1.2316, 1.2343, 1.2344, 1.2379, 1.2083 (secondary heat treatment), 1.4112/1.4122, 1.8519/1.8550/1.7735 
| Treatment temperature | 450°C standard, 380°C on request (steels with > 10% Cr). Please always double check with the BALITHERM® PRIMEFORM product information 
| Treatable surfaces | Polished surfaces (mirror/brushed) and textured surfaces (shot-peened, etched, eroded) 
| Post-treatment | Generally possible 
| Combinations with other coatings | BALINIT® C, BALINIT® ALCRONA PRO, BALINIT® Futura Nano, BALINIT® Lumina, BALINIT® D, BALINIT® A, BALINIT® Cromal, BALINIT® Cromal Plus, BALINIT® Dylyn, BALINIT® Dylyn Plus, BALINIT® Dylyn Pro 
| Tool dimensions | Length max. 9.500 mm 
|               | Part weights up to 25 t 

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**Tap into our global network of coating centres to fully exploit the potential of your plastic injection moulds**

使用欧瑞康巴尔查斯全球涂层网络，激发您注塑模具的潜力:

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You can find a full listing of our locations at: [www.oerlikon.com/balzers](http://www.oerlikon.com/balzers)