

BALINIT ALCRONA PRO

Uniquely adaptable

Universal machining at the highest level



Cutting Tools



BALINIT ALCRONA PRO

Optimal machining, multiple benefits

You are undoubtedly familiar with this challenge faced in manufacturing engineering: Your tools are already subjected to heavy mechanical and thermal loading, yet there is a drive to continuously increase productivity. So being able to rely on a coating that has been adapted for changing manufacturing conditions and masters new challenges is really important: BALINIT® ALCRONA PRO

from Oerlikon Balzers, a worldwide technological leader in the field of hard coatings. Benefit from the improved properties of this coating and a multitude of possible applications coupled with exceptional reliability – even after reconditioning. Get the BALINIT® ALCRONA PRO competitive edge with its many benefits.

Coating properties that are top notch – as are your advantages

OPTIMIZED PERFORMANCE

Optimized process parameters and modified layer structure



Significantly strengthened performance profile
Broad application range

Very high wear resistance and excellent hot hardness



Vastly improved tool lifetimes compared to conventional all-round coatings

Very good thermal shock stability



Top results in both wet and dry machining and at the highest of cutting speeds

Usable at significantly higher cutting speeds



Increased machine utilization and productivity

AlCrN-based material composition



Groundbreaking all-round coating

BALINIT® ALCRONA PRO
More productivity and manufacturing reliability with a great width of application possibilities

Rely on a tool coating with application versatility

Carbide and HSS end mills, modular milling cutters

Roughing and finishing of

- Steel, up to 52 HRC
- Cast iron
- Wet, MMS and dry machining

Drills

Drilling in

- Steel, up to 52 HRC
- Cast iron
- Wet, MMS and dry machining

Carbide and HSS hobs, stick blades, shaper cutters

Gear cutting in

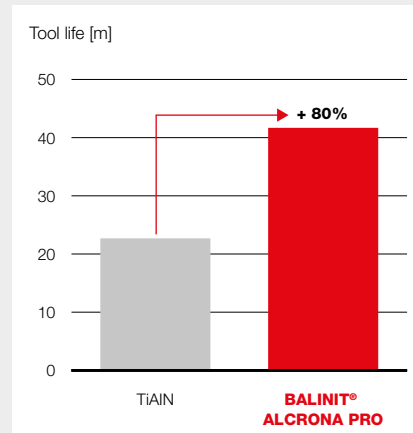
- Steel, up to 52 HRC
- Wet, MMS and dry machining

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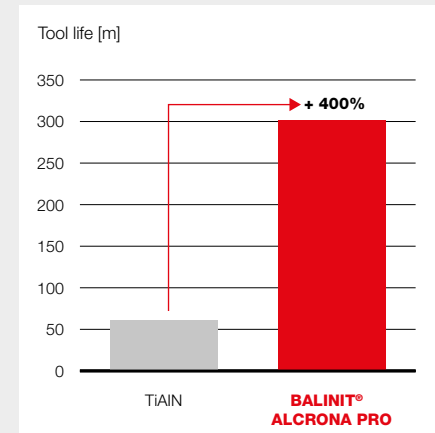
The ideal solution for your end mills and hobs



Rough milling, wet



Wet machining of carbon steel



Tool

Carbide end mill
Ø 10 mm

Workpiece

Steel 1.2344 (AISI H13, SKD 61)
38 HRC, 1200 N/mm²

Cutting data

$v_c = 175$ m/min
 $f_t = 0.05$ mm
 $a_e = 4$ mm, $a_p = 8$ mm

6% Emulsion

Source

Oerlikon Balzers cutting laboratory

Tool

Carbide end mill

Ø 8 mm, Z = 3

Workpiece

Steel 1.1191 (AISI 1045, S45C)

$v_c = 400$ m/min
 $f_t = 0.1$ mm
 $a_e = 0.5$ mm, $a_p = 10$ mm
 $VB_{max} = 0.12$ mm

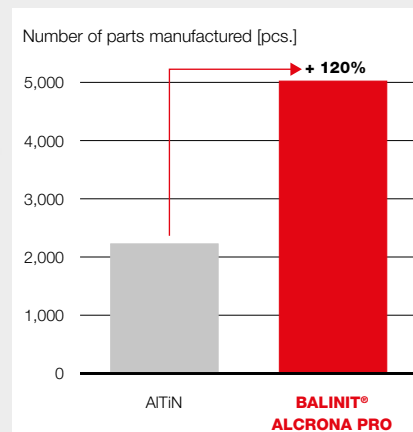
6% Emulsion

Source

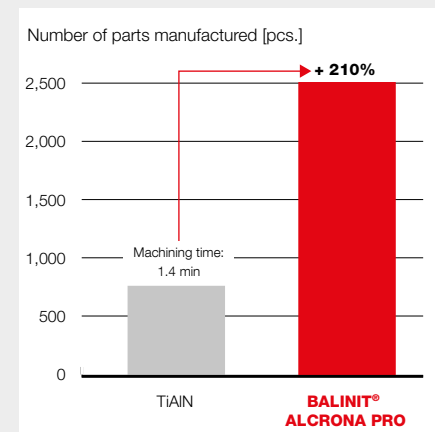
Oerlikon Balzers cutting laboratory



Hobbing: Increased service life



Hobbing: Increased productivity and service life



Tool

Hob, PM HSS

Workpiece

Steel 1.7131 (~ AISI 5120, ~SMnC 420(H))

Cutting data

$v_c = 200$ m/min
 $VB \sim 0.3$ mm

dry

Source

Automobile manufacturer

Tool

Hob, PM HSS

Ø 90 mm

S390

Workpiece

Steel 1.6526 (~AISI 8620, ~ SNCM 220 (H))

| | |
|-------------------|-------------------|
| TiAlN: | ALCRONA PRO: |
| $f_t = 3$ mm | $f_t = 4$ mm |
| $v_c = 110$ m/min | $v_c = 146$ m/min |
| with oil | with oil |

Source

Automotive supplier Sweden

Reduce your tool costs with reconditioning

BALINIT® ALCRONA PRO 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%



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

Headquarters

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