

# BALIQ TISINOS PRO

Maximum performance for hardened and stainless steels, and high-temperature alloys



**Cutting Tools**



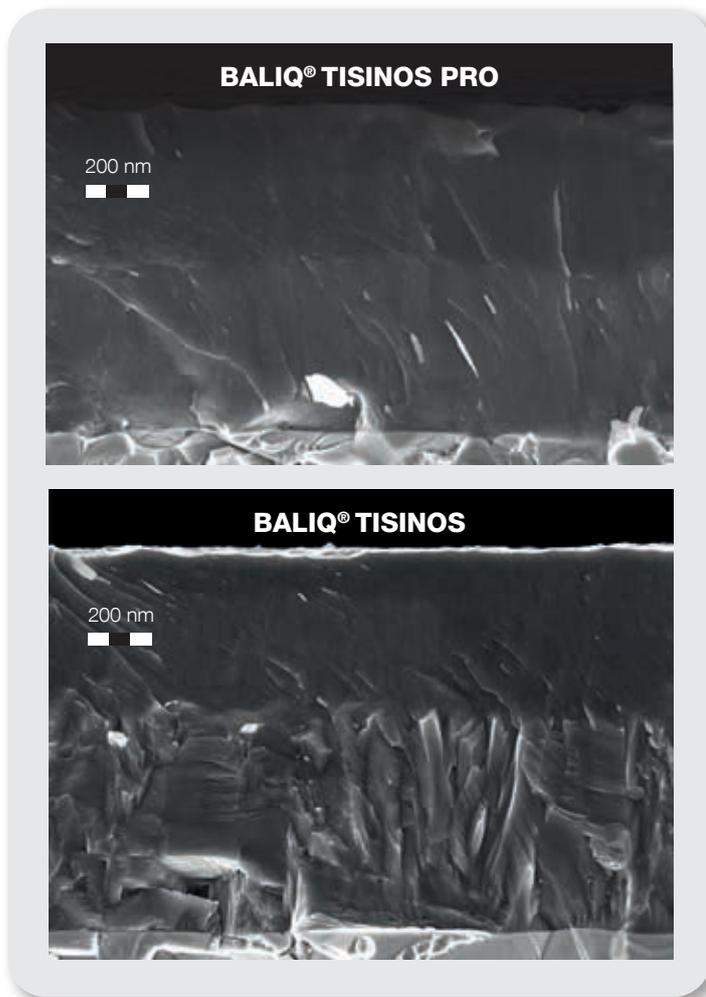
# BALIQ TISINOS PRO – higher process reliability for difficult-to-cut materials

Cutting tools that machine hardened steels or high-temperature alloys require a coating specifically designed to withstand high thermal stress caused by heavy loads. With its increased toughness and improved wear resistance, BALIQ® TISINOS PRO is the preferred coating for demanding hard machining up to 70 HRC.

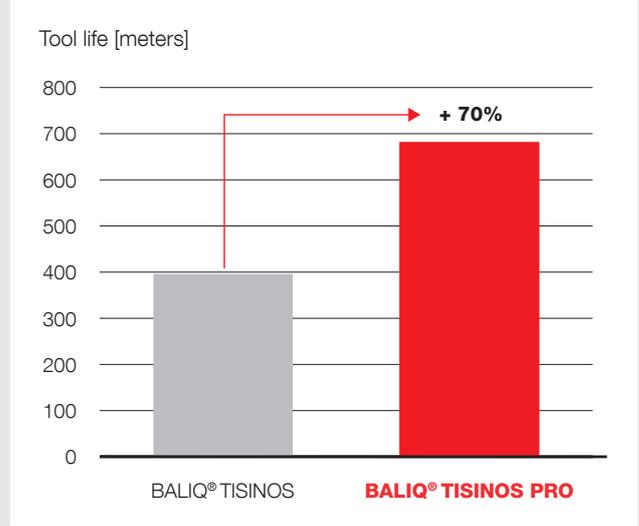
The AlTiSiN-based coating is applied using our advanced S3p technology, which produces particularly smooth and defect-free surfaces, resulting in longer tool life and improved reliability between different cutting edges of the same tool.



**Improved microstructure**  
for exceptional wear resistance even at extreme temperatures.



## BALIQ® TISINOS PRO – milling tool steel 58 HRC (1.2379)



<b>Tool</b>	Endmill Ø 10.0 mm
<b>Workpiece</b>	Steel 1.2379, X155CrVMo121 (AISI D2, JIS SKD11) 58 HRC
<b>Cutting parameters</b>	$v_c = 210$ m/min $f_z = 0.12$ mm/tooth $a_p = 3$ mm $a_e = 0.30$ mm dry
<b>Source</b>	Oerlikon Balzers cutting laboratory

## Outstanding coating properties

BALIQ® TISINOS PRO	Coating material	Coating hardness $H_{IT}$ [GPa]	Compressive stress [GPa]	Max. service temperature [°C]	Coating temperature [°C]	Coating colour
	AlTiSiN-based	38 +/-1	-3.1 +/--1	1,000	< 500	bronze

All given data are approximate values and depend on application, environment and test conditions.

**Discover how BALIQ TISINOS PRO boosts performance. Contact us now!**

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