

GENERIC COATING FOR CUTTING AND FORMING

ALL4 is an AlCrTiN universal coating. It covers a wide range of applications as well as workpiece materials. The coating is particularly suitable for materials that are difficult to machine.

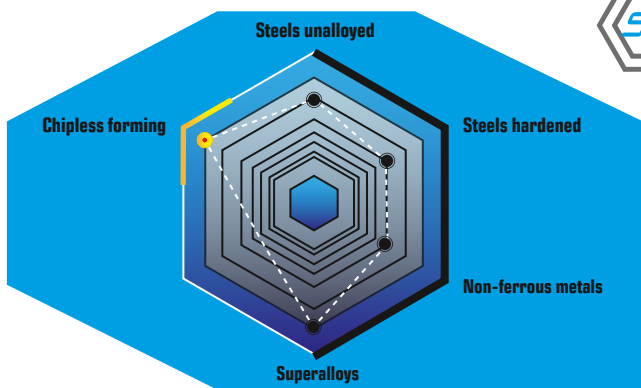
Highlights:

- Covers many application processes in cutting and forming
- Suitable for different workpiece materials
- Very wear-resistant at high temperatures
- Heat-resistant and tough

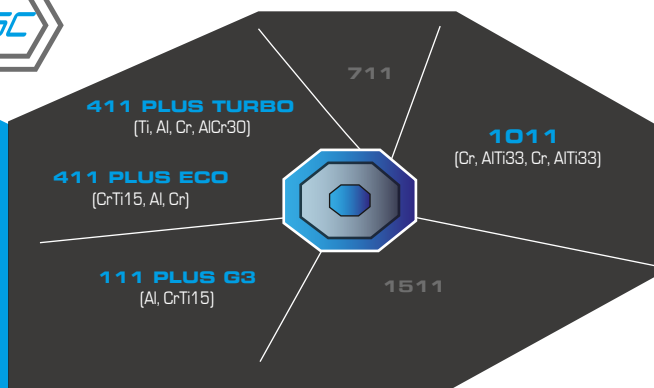
Signature Coatings



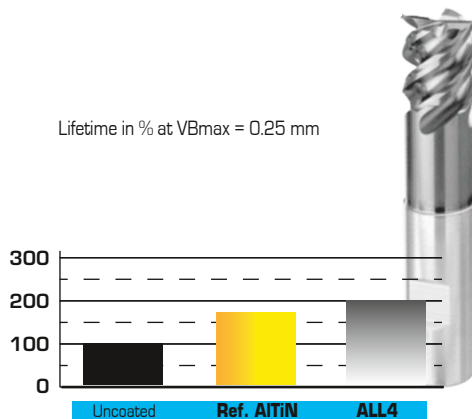
Characteristic in cutting + chipless forming



Coating units and cathode configurations

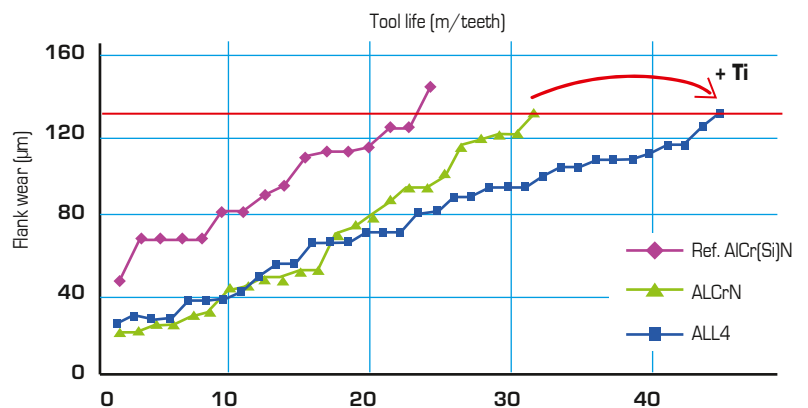


Milling in Inconel 718:



Tool: roughing cutter; D10 x 22 / R1
 Workpiece material: Inconel 718 (200 mm x 200 mm x 36 mm)
 KSS: B-Cool 9665; ap = 12 mm (2x); ae = 0.1 mm; vc = 90 m/min; fz = 0.21 mm
 Post-treatment: drag grinding / wet blasting
 Source: GFE, Germany

Flank wear with HSS hob in 20 MnCr 5:



Tool: HSS hob; D90
 Workpiece material: 20 MnCr 5
 Coolant air; mn = 2.3 mm; vc = 150 m/min; fa = 1.69 mm/rot; zo = 5
 Max. chip thickness hcu = 0.347 mm
 Source: IFG Magdeburg

Specifications

Color: grey

Nano-hardness [GPa]: 36 - 38

Coefficient of friction [µ] PoD (at RT, 50 % humidity): 0.5

Coating thickness [µm]: 1 - 5

Max. service temperature [°C]: 900

Coating temperature [°C]: 400 - 500