

Signature Coating ta-C

Solution for graphite machining and for non-ferrous metals

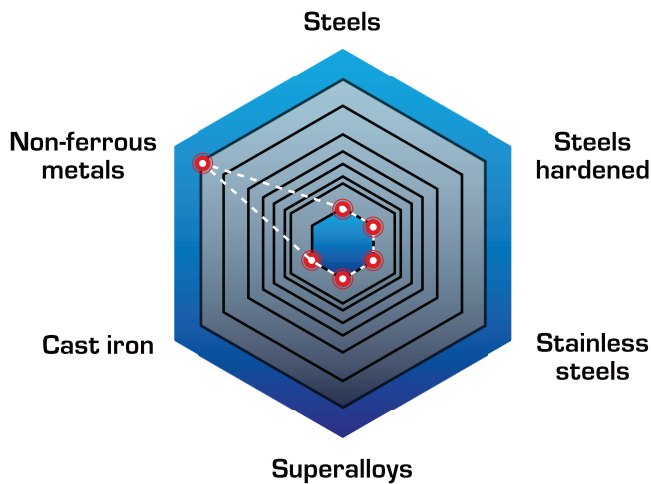


ta-C belongs to the PLATIT DLC3 hydrogen-free coating generation with over 50% sp³ content. The high sp³ bond fraction results in a higher density, hardness (at ambient and elevated temperature), thermal stability, oxidation resistance and lower thermal conductivity.

Highlights:

- Over 50% sp³ content
- High density and hardness
- Thermal stability
- Oxidation resistance
- Low chemical affinity and thermal conductivity
- Low roughness
- Stable process and low maintenance intervals

Characteristics in cutting:

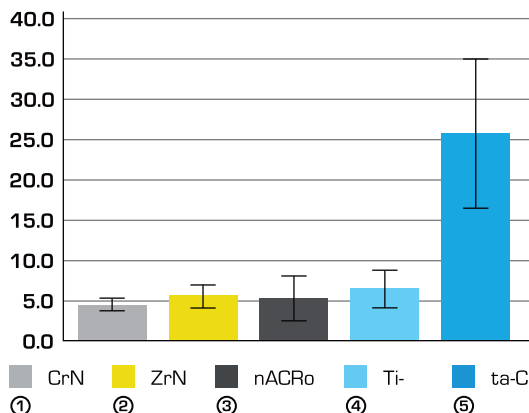


Specifications

Color	From rainbow to anthracite
Nano-hardness [GPa]	45–50
Coefficient of friction [μ] PoD (at RT, 50% humidity)	0.1
Coating thickness [μm]	0.3–1
Max. service temperature [°C]	500
Coating temperature [°C]	< 100
111 TRM	Cr, C
411 G3 LACS	-, -, Cr, C SCIL
411 G3 LACS	-, -, Cr, C FMS
411 G3 LACS	-, Cr-RM, -, C SCIL
411 G3 LACS	-, Cr-RM, -, C FMS

Machining Al alloys with Si content to 10–14%: ta-C with Pi411 PLUS LACS® features higher performance and the least torque value measured

Complex Performance CP



Tool: aluminum step drill; GIW/PCG
Workpiece material: GD-AlSi9Cu3(Fe); 9.3 % Si
Source: PLATIT AG and PannonPLATIT, Budapest, HU

DLC3 coated end mill under scanning electron microscope:

