Signature Coating nACRo

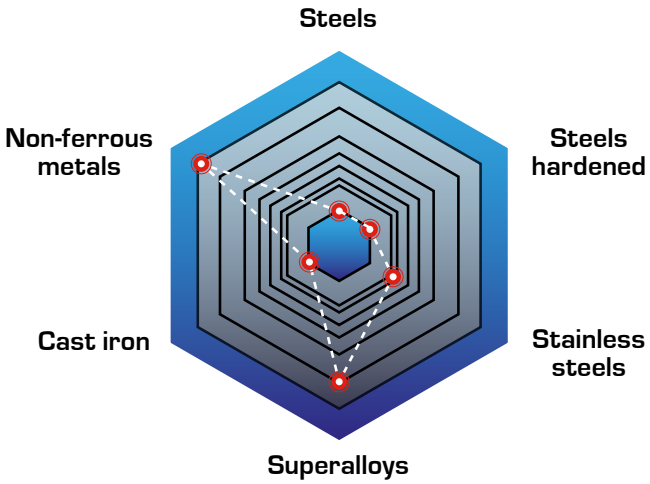
Nanocomposite for non-ferrous materials

nACRo is PLATIT`s nanocrystalline nanocomposite. Based on CrN adhesion layer, it has a AlTiCrN microcrystalline core layer for toughness and a AlCrSiN top layer which guarantees thermal stability and wear resistance. Also, nACRo can also be deposited on sharp cutting edges for machining wood, aluminum alloy with Si content > 12% and titanium alloys such as TiAl6V4. Furthermore, nACRo can be used for aluminum injection molding.

Highlights:

- High resistance against temperature changes, oxidation and abrasive wear
- Specialist for machining abrasive aluminum alloys
- Usage also in chipless forming

Charakteristics in cutting:

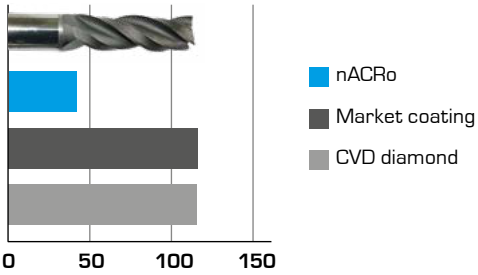


Specifications

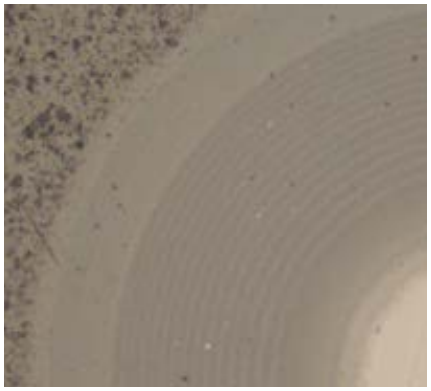
Color	grey
Nano-hardness [GPa]	39–41
Coefficient of friction [µ] PoD (at RT, 50 % humidity)	0.5
Coating thickness [µm]	1–4
Max. service temperature [°C]	1,100
Coating temperature [°C]	450–500
111 PLUS G3	(AlSi12, Cr)
411 PLUS ECO	(-, AlSi18, Cr)
411 PLUS TURBO	(-, AlSi18, Cr, AlTi33)

Milling in abrasive aluminum alloy:

Flank wear [µm]



Tool: solid carbide endmill; D8; z=3; cutting length = 25 mm
Workpiece material: EN AC 4700= <3.2583> AlSi12Cu
Coolant: emulsion
vc = 250 mm/min; n = rpm; ap = 5 mm; ae= 1 mm; fz = 0.16 mm/z
Source: GFE Schmalkalden



Calo 3 layers

CrN adhesion layer →
AlTiCrN core layer →
AlCrSiN top layer