

Signature Coating nACRo

Nanocomposite for non-ferrous materials

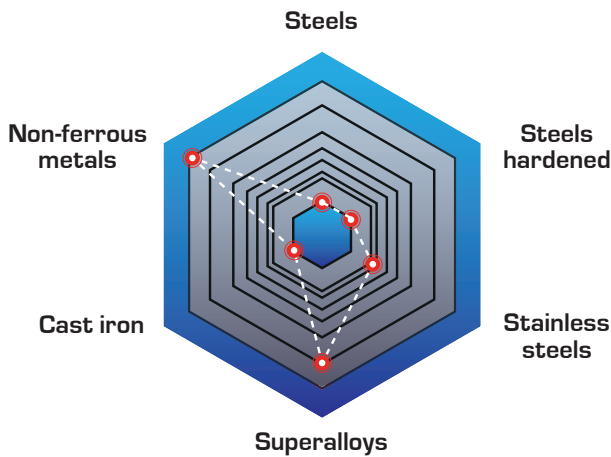


nACRo is PLATIT's nanocrystalline nanocomposite. Based on CrN adhesion layer, it has a AlCrN microcrystalline core layer for toughness and a AlCrSiN top layer which guarantees thermal stability and wear resistance. nACRo can also be deposited on sharp cutting edges for machining wood, aluminum alloy 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

Characteristics in cutting:

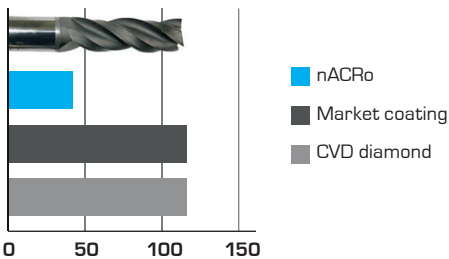


Specifications

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 G3	AlSi12, Cr
411 G3	-, AlSi18, Cr

Milling in abrasive aluminum alloy:

Flank wear [μm]



Tool: solid carbide endmill; DB; 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: nACRo

CrN adhesion layer
 AlCrN core layer
 AlCrSiN top layer