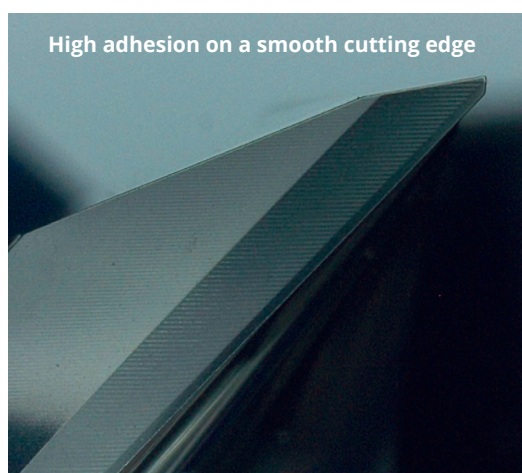
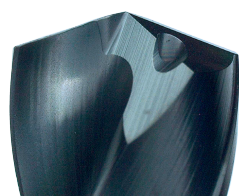


HIGH PERFORMANCE COATINGS

Super Hard Carbon PVD Coating Ta:c Tetra Amorphous Carbon Coating



Advantages:

- Reduced sticking effect (e.g. soft Al)
- Improved wear resistance (e.g. Al with high Si content)
- Ideal for machining of aluminum alloys as well as non-ferrous metals such as copper, silver or gold, GRP, CFK
- Improved finishing of milling surfaces (e.g. no burs in PCB applications)
- Lower Drilling Torque through a faster chip removal resulting in increased cutting speed
- Performances up to 6 times higher compared to uncoated tools
- Enables new applications for carbide drill / end mill by replacing PCD tools through carbide tools + Ta:c coating in a wide range of applications

Applications

- Machining
 - Aluminum (all types; soft or high Si containing materials)
 - Copper / Brass
 - PCBs
 - Carbon
 - Plastic composites
 - Noble material (e.g. gold, platinum, titanium) machining
- IC punching
- Precision components
- Functional decorative

Tools

- Routers
- End mills
- Drills
- Punches
- Paper knives
- Saw blades

Characteristics / Properties

Material	ta-C with ~ 80 % sp ³ content
Coating thickness	0,2 to 1,2 µ
Coating hardness	50 - 60 GPa (5.500 - 6.000 HV)
Coefficient of friction	0,1
Max. operating temperatur	500° C / 932° F
Max. deposition temperatur	120° C / 248° F
Color	Rainbow to gray*
Adhesion	Superior through HPIES etching
Biocompatibility	✓
Corrosion resistant	✓

*dep. coating thickness