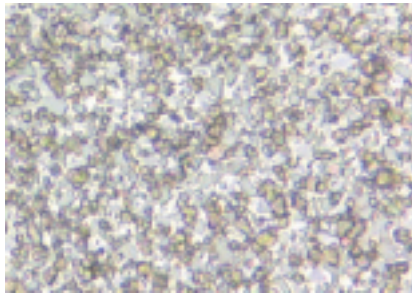
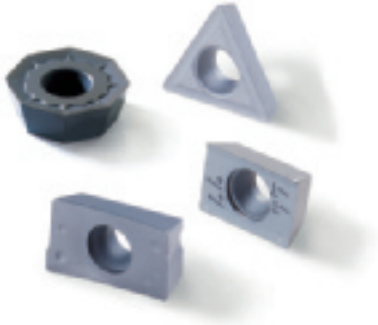


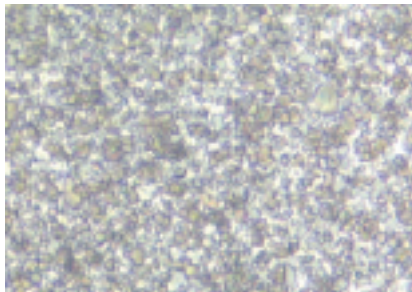
INSERT GRADES

UNCOATED GRADES



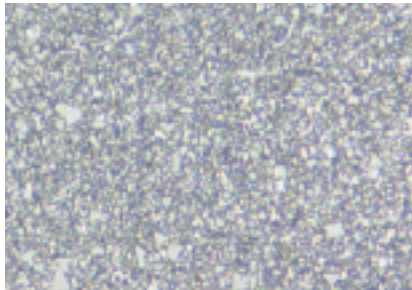
GRADE SF30

A tough grade intended for milling of steel, alloyed steel and stainless steel
The grade SF30 works well with or without coolant.



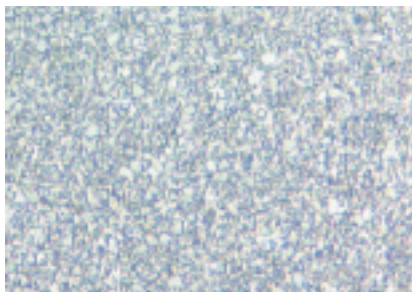
GRADE X44

Grade containing Ruthenium for use on steel and alloyed steel.
The grade X44 is recommended where toughness is more important than wear.
Application area: Alloyed steel.



GRADE GH1 MICROGRAIN

Micrograin grade designed for use on cast irons, and also bronzes, aluminums, Kevlar, etc..The grade GH1 works well with or without coolant. Low cutting pressure at high speeds due to sharp cutting edge.



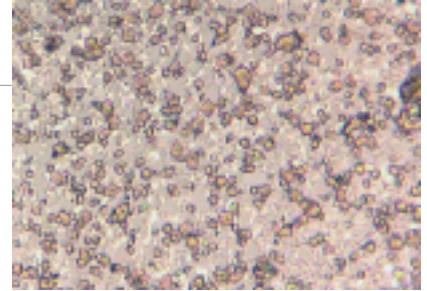
GRADE GH2 MICROGRAIN

Micrograin grade designed for use on cast irons, bronzes, aluminums, Kevlar, etc.. This grade is tough and able to handle high pressure, vibration and shock.

UNCOATED GRADES

GRADE SU5400

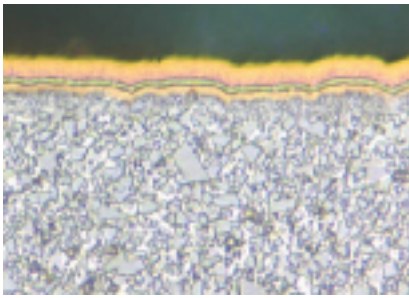
A tough uncoated C5 grade for unalloyed and alloyed steels.



GRADE CN25 CERMET

Applications with limited shocks. Excellent surface finish.
High resistance to wear and plastic deformation.
For finish face milling of steels, cast irons, aluminum, etc...
with wiper insert SPHX 12M512 EN.



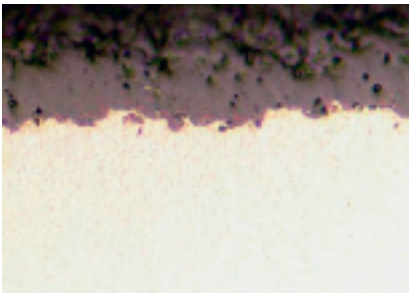


GRADE PFZ

Coated with TiN-TiC-TiN by CVD.

Coating thickness 3-5microns

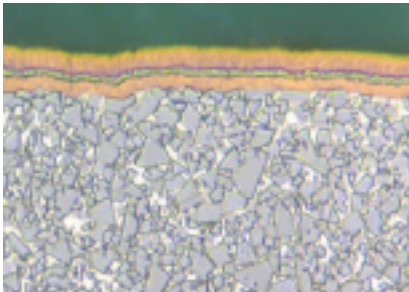
For use on steel, alloyed steel and stainless steel, with or without coolant. With coolant, PFZ performs well when milling titanium or nickel based alloys and ductile iron.



GRADE X400

Coated with TiAlN by PVD

A high performance grade with a high level of toughness and high wear resistant, thin layer PVD coating, for use in demanding conditions of high metal removal rates or interrupted cuts. This specifically designed ruthenium grade (patent pending) allows high levels of cutting pressure and offers increased security of the cutting edge. For use on low and medium carbon steels, tool steels and hardened steel (52 - 56 HRc)

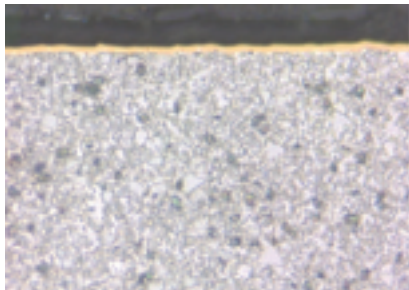


GRADE X500

Coated with TiN-TiC-TiN by CVD

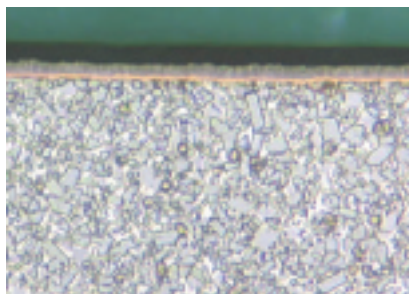
Coating thickness 3-5microns

It has almost the same application range as PFZ. The grade X500 is different because of its improved edge toughness. For use in difficult conditions on high temperature alloys and low cutting speeds. X500 also contains ruthenium



GRADE SFZ

Micrograin carbide with TiN PVD coating. For operations requiring a sharp edge condition.



GRADE MP91M

TiN-MT TiCN-Al₂O₃ by CVD

Coating thickness 4-7microns

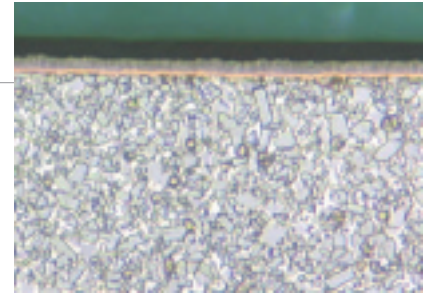
For use on steel, alloyed steel and cast iron. With its aluminum oxide coating, the grade MP91M is recommended every time wear characteristics are more important than toughness.

COATED GRADES

GRADE SC3025

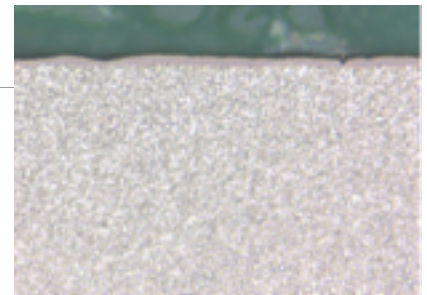
TiN - TiCN - Al₂O₃ by CVD

Designed to offer wear and abrasion resistance in all cast irons.



GRADE SP4036

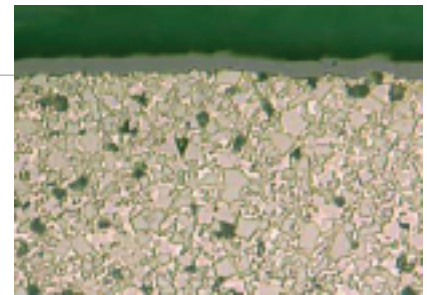
Micrograin carbide with multilayer TiAlN PVD coating. It has a lower friction coefficient and a lower cutting energy during finishing. The sharper cutting edge reduces the built-up edge damage and gives the work pieces an excellent surface finish. Recommended for alloyed steel and grey, spheroidal, nodular, malleable and compacted graphite cast iron at higher speeds.



GRADE SP5464

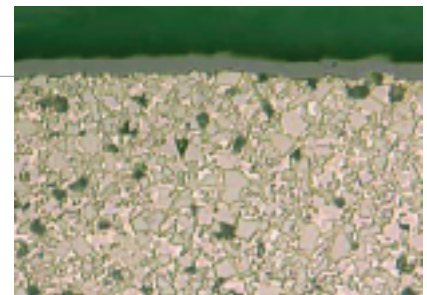
TiAlN by PVD

A tough coated grade for steels and cast irons.



GRADE SP6564

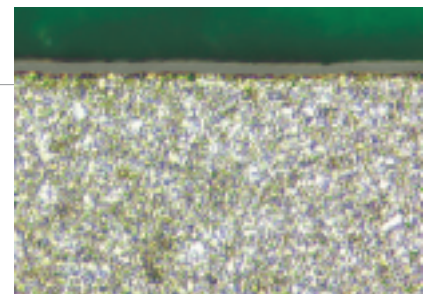
Carbide coated with TiAlN and lubricity layer PVD coating. It has a lower friction coefficient and a lower cutting energy during finishing. The sharper cutting edge reduces the built-up edge damage and gives the work pieces an excellent surface finish. Recommended for steel and stainless steel, in either higher speed or dry machining applications.



GRADE SP1064

Micrograin carbide with TiAlN and lubricity layer PVD coating.

For semi-finish and finish machining. Ideal for ball nose cutters at higher surface speeds, or for greater wear resistance.



GRADE CLASSIFICATION

MATERIALS TO BE MACHINED	CODE		Uncoated			Micrograin Uncoated		Coated CVD				Coated PVD						
	C	ISO	SF30	X44	SU5400	GH1	GH2	MP91M	PFZ	X500	SC3025	SP4036	SP6564	SP1064	SP5464	SFZ	X400	
	Unalloyed and alloyed steel	C8	P01 P05 P10												SP1064			
C7		P15 P20 P25						MP91M					SP4036			SFZ		
		P30 P35	SF30						PFZ		X500							X400
		P40 P45 P50		X44		SU5400								SP6564		SP5464		
Stainless steel		M05 M10 M15 M20 M30 M35 M40					GH1		MP91M				SP4036		SP1064			SFZ
	C4	K01 K05																
		C3	K10 K15				GH1		MP91M			SC3025			SP1064			
			C2	K20 K25										SP4036				SFZ
	C1	K30 K35 K40									X500			SP6564		SP5464		
		Nonferrous materials	N01 N05 N10 N15 N20 N25 N30					GH1										SFZ
	S01 S05 S10 S15 S20 S25 S30			SF30														
										PFZ				SP6564			SFZ	
											X500							
Hard materials: Hardened steel, hardened cast iron materials, chilled cast iron.	H01 H05 H10 H15 H20 H25 H30											SP4036				SFZ		