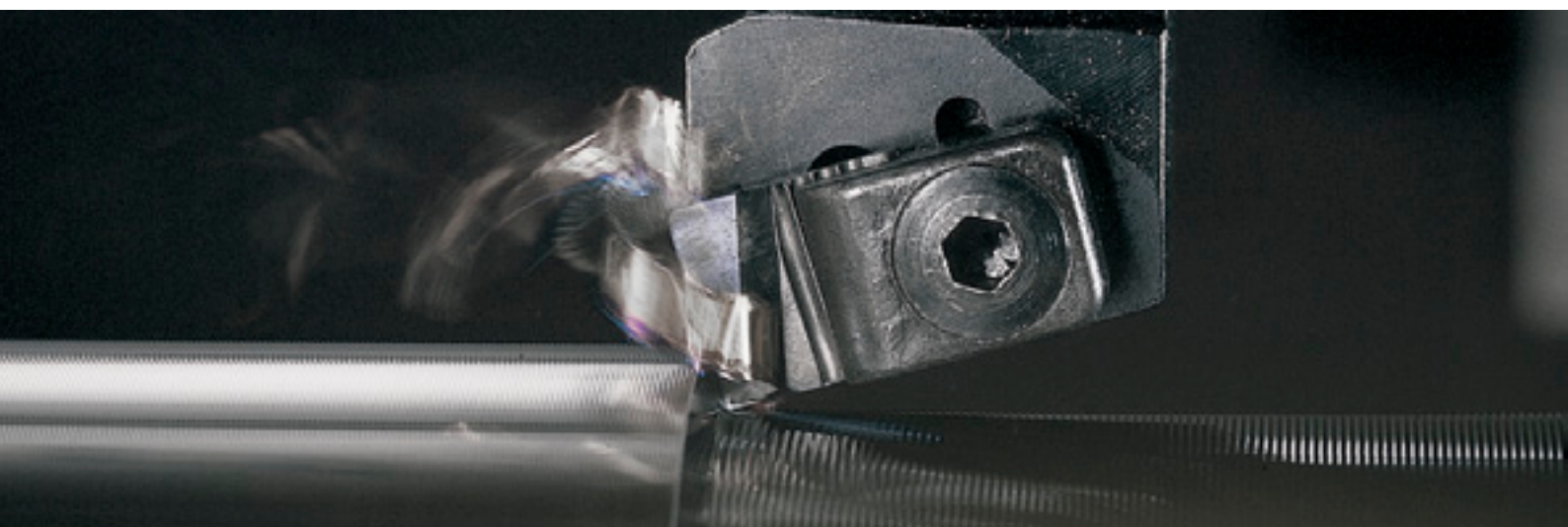


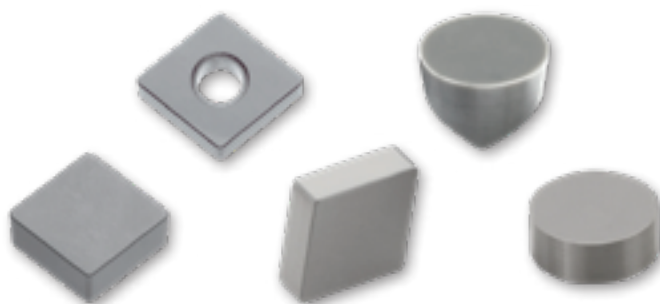
KS001



High speed machining of Ni-based alloys with greater fracture resistance

Advanced silicon-carbide ceramic inserts with ultra-strong whiskers for excellent wear and fracture resistance.

High-speed machining of super alloys with notch wear resistance.



**KEEPS YOU
AHEAD**



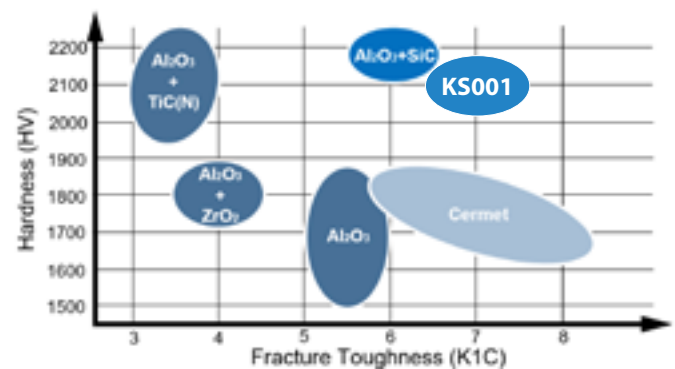
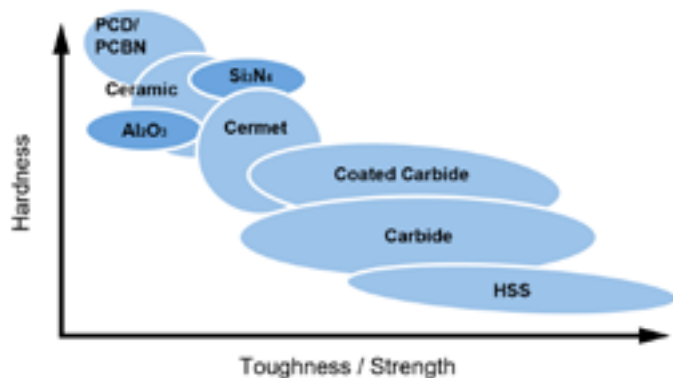
Whisker reinforced ceramic

KS001

Advanced silicon-carbide ceramic inserts with ultra-strong whiskers for excellent wear and fracture resistance. High-speed machining of super alloys with notch wear resistance

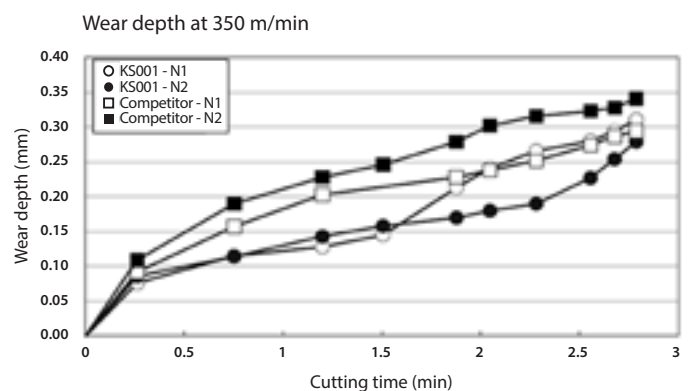
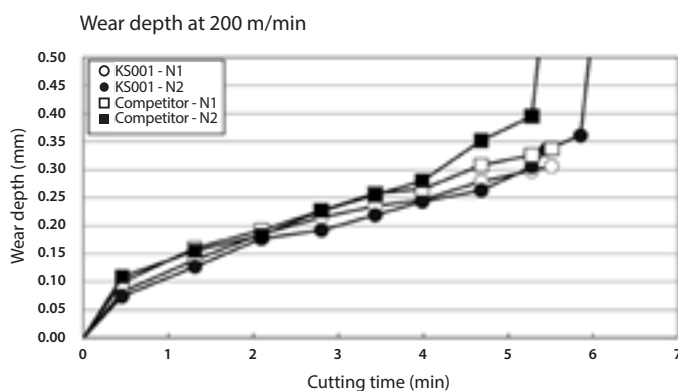
1 Operate up to 3~4 times the speed used for coated carbide tools

Ultra-strong whiskers provide increased fracture toughness and notch wear resistance in the machining of super-alloys at high speeds.



2 Excellent wear and thermal shock resistance at high surface speeds

Wear Comparison (internal Evaluation)

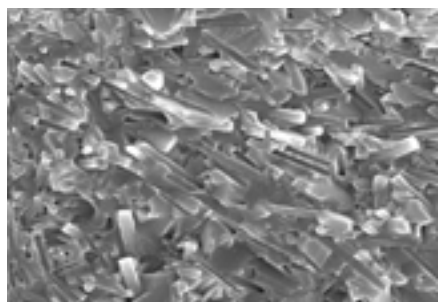


Cutting conditions: Alloy718 (HRC47), Vc= 200 m/min / 350 m/min, f= 0.2 mm/rev, D.O.C. = 1.0 mm. Coolant available.

3

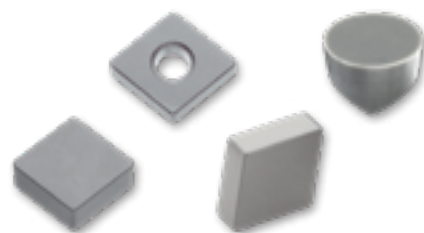
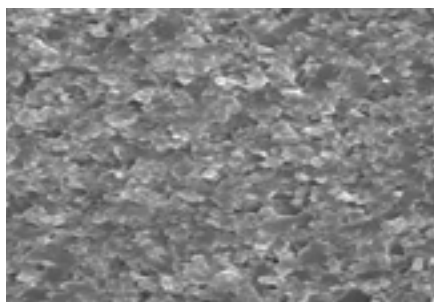
Advanced ceramic micro structure

KS001 whisker insert



Ultra-strong whiskers provide increased fracture toughness and notch wear resistance

Non-whisker ceramic insert



KS001 grade properties

Grade	Composition	Density (g/cm ³)	Hardness (Hv)	Toughness (MPa·m ^{1/2})	Thermal expansion coefficient (* 10 ⁻⁶ /K)
KS001	Al ₂ O ₃ + SiC	3.7	2,100	7	7.6

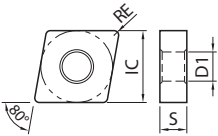
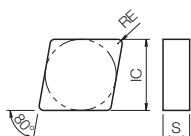
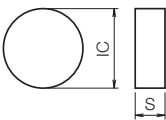
KS001 applications

Grade	Application range	Characteristics
KS001	Ni-based alloys, Co-based alloys in high speed cutting. Roughing & finishing with continuous or light interruption.	Best performance for HRSA (inconel, waspaloy, stellite). For high-speed machining of HRSA with optimized heat and fracture resistance.

Recommended cutting conditions

Workpiece	Grade	Application	Recommendation		
			Vc (m/min)	D.O.C. (mm)	f (mm/rev)
Ni-based alloy	KS001	Interrupted	~ 250	~ 3.0	~ 0.3
		Continuous	~ 500	~ 5.0	~ 0.5

Inserts

Shape		Description	Edge prep.	Dimensions (mm)				Whisker ceramic
				IC	S	D1	RE	KS001
		CNGA 120408T00520	T00520	12.7	4.76	5.16	0.8	●
		120412T00520					1.2	●
		120416T00520					1.6	●
		CNGN 120708T00520	T00520	12.7	7.94	-	0.8	●
		120712T00520					1.2	●
		120716T00520					1.6	●
		RNGN 090400T00520	T00520	9.525	4.76	-	-	●
		120400T00520		12.7	7.94			●
		120700T00520		12.7	7.94			●
		RCGX 090700T00520	T00520	9.525	8	-	-	●
		120700T00520		12.7				●

● : Standard item

Inserts sold in 10 piece boxes



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