



KS6030

KS6040

SiAlON CERAMIC
FOR HEAT RESISTANT ALLOY



RELIABLE
KS6030
FINISHING-MEDIUM



STABLE
KS6040
ROUGHING



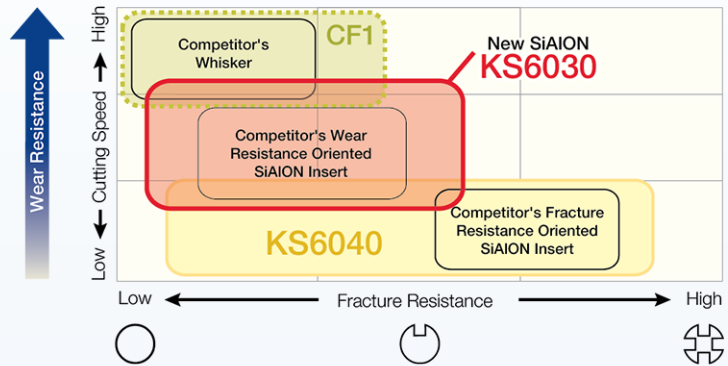
KS6030 / KS6040

For Finishing - Medium For Roughing

KS6030

ADVANTAGES

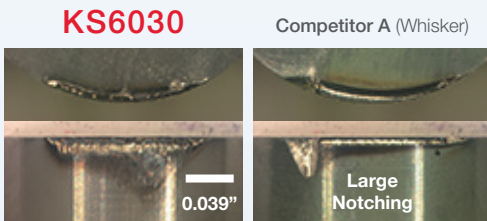
- Superior wear resistance with high chemical stability
- Perfect for semi-finishing and profiling at medium to high cutting speeds
- Prevents burr formation and chipping due to superior notch wear resistance
- Available for milling applications as well



WEAR RESISTANCE COMPARISON

TURNING

Cutting Conditions
 Workpiece Material : Ni-Base Heat Resistant Alloy
 $V_c = 980\text{sfm}$ $f = 0.008\text{ipr}$ D.O.C. = 0.079"
 Cutting Time 2.5min Wet



Cutting Conditions
 Workpiece Material : Ni-Base Heat Resistant Alloy
 $V_c = 490\text{sfm}$ $f = 0.016\text{ipr}$ D.O.C. = 0.079"
 Cutting Time 2.5min Wet

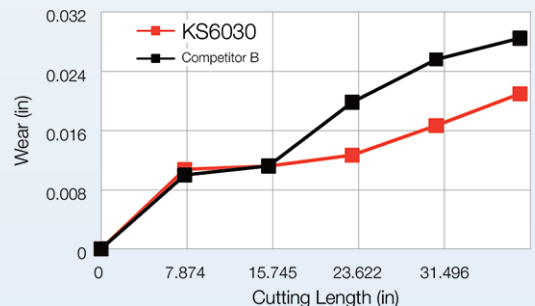
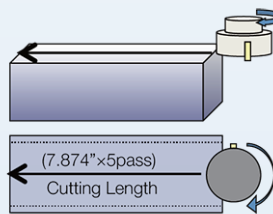


KS6030 provides superior tool life and efficiency in low to high speed machining. Also prevents burr formation and cracks due to excellent anti-notching performance.

(Internal Evaluation)

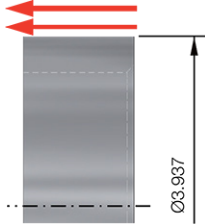
MILLING

Cutting Conditions
 Workpiece Material : Ni-Base Heat Resistant Alloy
 Insert: RNG43T00420 (KS6030)
 $V_c = 3280\text{sfm}$ $f = 0.004\text{ipr}$ D.O.C. = 0.039"



(Internal Evaluation)

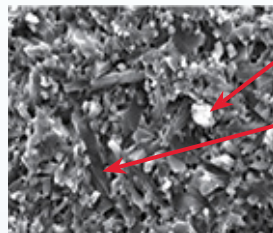
KS6030 Case Study (Ni-Base Heat Resistant Alloy)

Ni-Base Heat Resistant Alloy Seal • Vc = 560sfm • 0.008 ipr • 0.047" D.O.C. (Roughing) • 0.020" D.O.C. (Finishing) • Wet • RNG45E001 (KS6030)		KS6030	2 pcs / edge
		Competitor C	1 pc / edge
		KS6030 doubled the tool life under the same cutting conditions as Competitor C (User Evaluation)	

KS6040

ADVANTAGES

- Improved wear and fracture resistance due to the mixture of hard and acicular (needle-shaped) particles
- Perfect for scaling and roughing

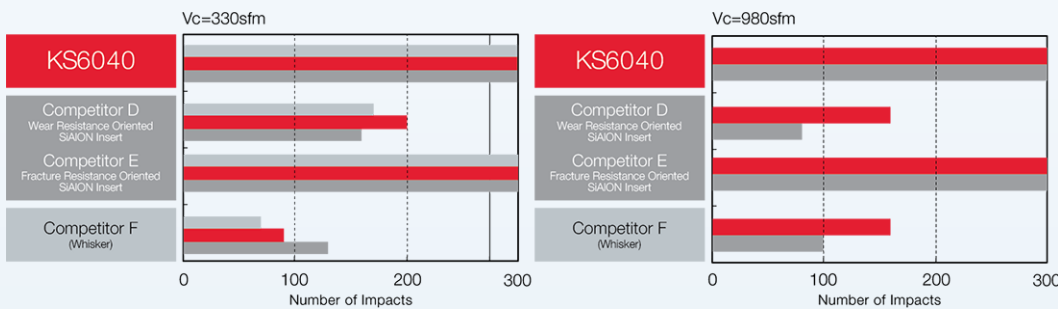
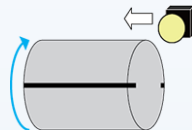


Hard Particle (Better Wear Resistance)

Acicular (Needle-Shaped) Particle (Better Fracture Resistance)

FRACTURE RESISTANCE COMPARISON

Cutting Conditions
Workpiece Material : Ni-Base Heat Resistant Alloy
Insert: RGN432 T00220
Vc = 330sfm, 980sfm f = 0.008ipr D.O.C. = 0.039" Wet



Compared to both Competitor F (Whisker) and Competitor D (Wear Resistance Oriented SiAlON Insert), KS6040 provides superior fracture resistance equivalent to Competitor E (Fracture Resistance Oriented SiAlON Insert)

KS6040 improves wear and fracture resistance compared to conventional SiAlON inserts in heat resistant alloy machining

Recommended Cutting Conditions										
Grade	Roughing	Finishing-Medium	Profiling	Vc (sfm)						
				0	660	1310	1970	2630	3280	
KS6030		★	★		WET				DRY	
KS6040	★	☆			WET				DRY	

★ : 1st Choice ☆ : 2nd Choice ■ : Turning ■ : Milling

Turning Recommended Edge Prep: E001/ T00420 (R Honing)				
Grade	Vc (sfm)	D.O.C. (inch)	f (ipr)	
KS6030	500 - 1200	0.004 - 0.010	0.006 - 0.014	
KS6040	500 - 1000	0.004 - 0.010	0.006 - 0.014	

Milling Recommended Edge Prep: T00420 (Chamfering)				
Grade	Vc (sfm)	D.O.C. (inch)	f (ipr)	
KS6030	2300 - 4000	0.004 - 0.008	0.003 - 0.005	
KS6040	2000 - 3300	0.004 - 0.008	0.003 - 0.005	

Inserts

Edge Preparation

E	Honed Cutting Edge	E001 E002	R0.001" Honed R0.002" Honed
T	Chamfered Cutting Edge	T00420	0.004" X 20° Chamfered Cutting Edge

Usage Classification

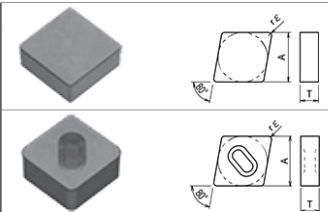
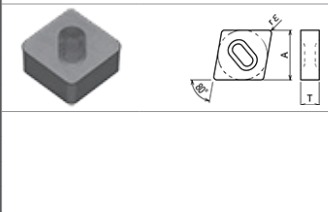

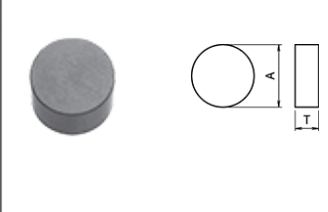

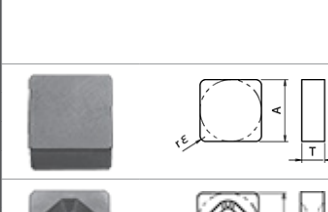
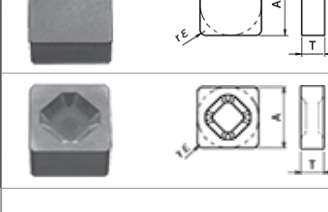
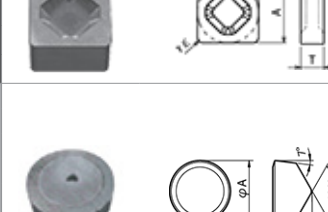
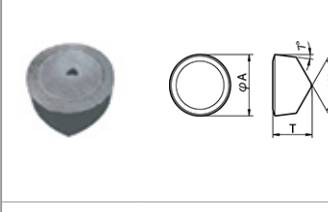
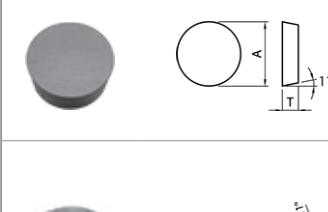
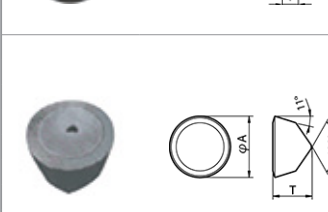
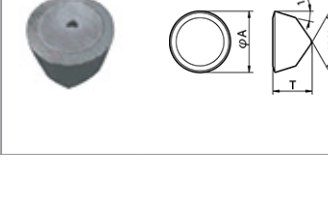

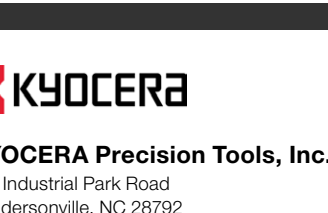
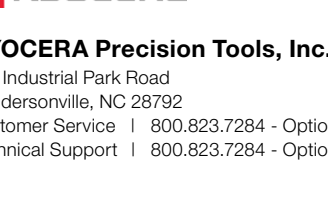
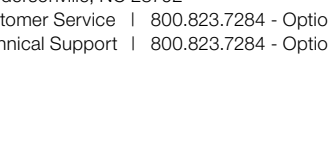

- ✱ Interruption / 1st Choice
- Light Interruption / 1st Choice

S

Heat Resistant Alloys

●

✱

	Edge Prep	Dimension (in)			KS6030	KS6040						
		re	A	T								
Negative Insert		CNG	432T00420	CNGN	120408T01020	T00420	1/32	1/2	3/16		●	
			433T00420		120412T01020	T00420	3/64	1/2	3/16		●	
		CNG	432T00825	CNGN	120408T02025	T00825	1/32	1/2	3/16		●	
			433T00825		120412T02025	T00825	3/64	1/2	3/16		●	
		CNGX	453T00420	CNGX	120712T01020	T00420	3/64	1/2	5/16		○	
			454T00420		120716T01020	T00420	1/16	1/2	5/16		○	
		CNGX	453T00825	CNGX	120712T02025	T00825	3/64	1/2	5/16		○	
			454T00825		120716T02025	T00825	1/16	1/2	5/16		○	
	Positive Insert		RNG	32E001	RNGN	090300E003	E001	-	3/8	1/8	●	○
				32E002		090300E005	E002	-	3/8	1/8		○
				32T00420		090300T01020	T00420	-	3/8	1/8	●	○
			RNG	43E001	RNGN	120400E003	E001	-	1/2	3/16	●	○
			43E002		120400E005	E002	-	1/2	3/16		○	
			43T00420		120400T01020	T00420	-	1/2	3/16	●	○	
		RNG	45E001	RNGN	120700E003	E001	-	1/2	5/16	●	○	
			45E002		120700E005	E002	-	1/2	5/16		○	
			45T00420		120700T01020	T00420	-	1/2	5/16	●	○	
		RNG	65E001	RNGN	190700E003	E001	-	3/4	5/16	●	○	
			65E002		190700E005	E002	-	3/4	5/16		○	
			65T00420		190700T01020	T00420	-	3/4	5/16	●	○	
	RNG	85E001	RNGN	250700E003	E001	-	1	5/16	●	○		
		85E002		250700E005	E002	-	1	5/16		○		
		85T00420		250700T01020	T00420	-	1	5/16	●	○		
Positive Insert		SNG	433T00420	SNGN	120412T01020	T00420	3/64	1/2	3/16		●	
			434T00420		120416T01020	T00420	1/16	1/2	3/16		●	
		SNG	433T00825	SNGN	120412T02025	T00825	3/64	1/2	3/16		●	
			434T00825		120416T02025	T00825	1/16	1/2	3/16		●	
		SNGX	453T00420	SNGX	120712T01020	T00420	3/64	1/2	5/16		○	
			454T00420		120716T01020	T00420	1/16	1/2	5/16		○	
		SNGX	453T00825	SNGX	120712T02025	T00825	3/64	1/2	5/16		○	
			454T00825		120716T02025	T00825	1/16	1/2	5/16		○	
		RCGX	24E001	RCGX	060600E003	E001	-	1/4	0.315	●	○	
			24E002		060600E005	E002	-	1/4	0.315		○	
			24T00420		060600T01020	T00420	-	1/4	0.315	●	○	
		RCGX	35E001	RCGX	090700E003	E001	-	3/8	0.315	●	○	
		35E002		090700E005	E002	-	3/8	0.315		○		
		35T00420		090700T01020	T00420	-	3/8	0.315	●	○		
	RCGX	45E001	RCGX	120700E003	E001	-	1/2	0.315	●	○		
		45E002		120700E005	E002	-	1/2	0.315		○		
		45T00420		120700T01020	T00420	-	1/2	0.315	●	○		
	RPG	32E001	RPGN	090300E003	E001	-	3/8	1/8	●	○		
		32E002		090300E005	E002	-	3/8	1/8		○		
		32T00420		090300T01020	T00420	-	3/8	1/8	●	○		
	RPG	43E001	RPGN	120400E003	E001	-	1/2	3/16	●	○		
		43E002		120400E005	E002	-	1/2	3/16		○		
		43T00420		120400T01020	T00420	-	1/2	3/16	●	○		
	RPGX	24E001	RPGX	060600E003	E001	-	1/4	1/4	●	○		
		24E002		060600E005	E002	-	1/4	1/4		○		
		24T00420		060600T01020	T00420	-	1/4	1/4	●	○		
	RPGX	35E001	RPGX	090700E003	E001	-	3/8	0.315	●	○		
		35E002		090700E005	E002	-	3/8	0.315		○		
		35T00420		090700T01020	T00420	-	3/8	0.315	●	○		
	RPGX	45E001	RPGX	120700E003	E001	-	1/2	0.315	●	○		
		45E002		120700E005	E002	-	1/2	0.315		○		
		45T00420		120700T01020	T00420	-	1/2	0.315	●	○		

● : U.S. Stock ○ : World Express (Shipping - 7-10 Business Days)



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