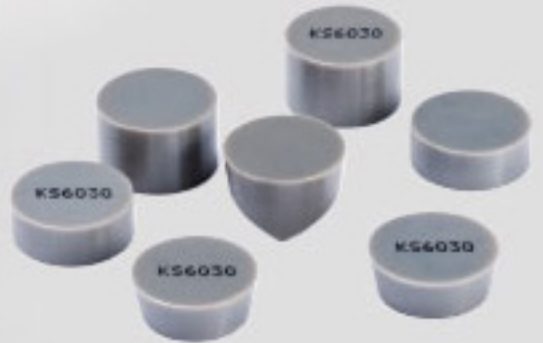




KS6030 KS6040

SiAlON CERAMIC
FOR HEAT RESISTANT ALLOY



RELIABLE

KS6030

FINISHING-MEDIUM



STABLE

KS6040

ROUGHING



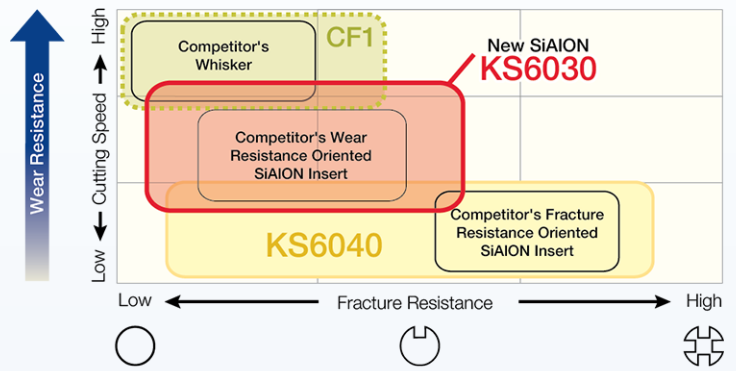
KS6030 / KS6040

For Finishing - Medium For Roughing

KS6030

ADVANTAGES

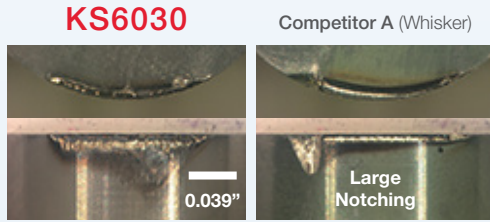
- Superior wear resistance with high chemical stability
- Perfect for semi-finishing and profiling at medium to high cutting speeds
- Prevents burr formation and chipping due to superior notch wear resistance
- Available for milling applications as well



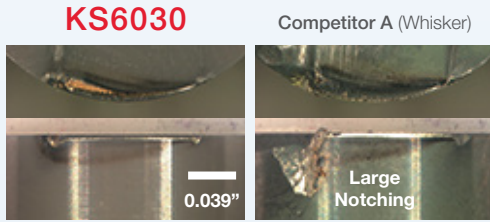
WEAR RESISTANCE COMPARISON

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

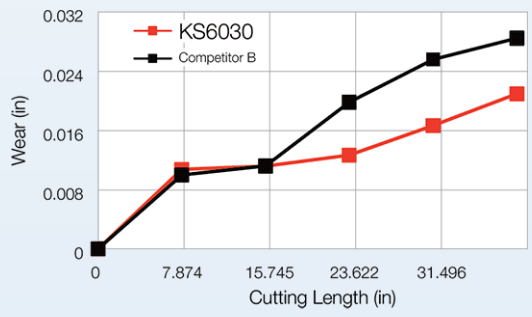
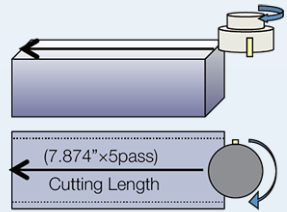


KS6030 provides superior tool life and efficiency in low to high speed machining. Also prevents burr formation and cracks due to excellent anti-notching performance.

(Internal Evaluation)

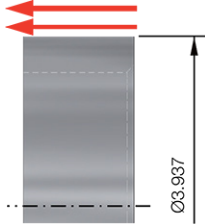
MILLING

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)

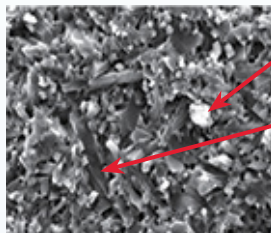
KS6030 Case Study (Ni-Base Heat Resistant Alloy)

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

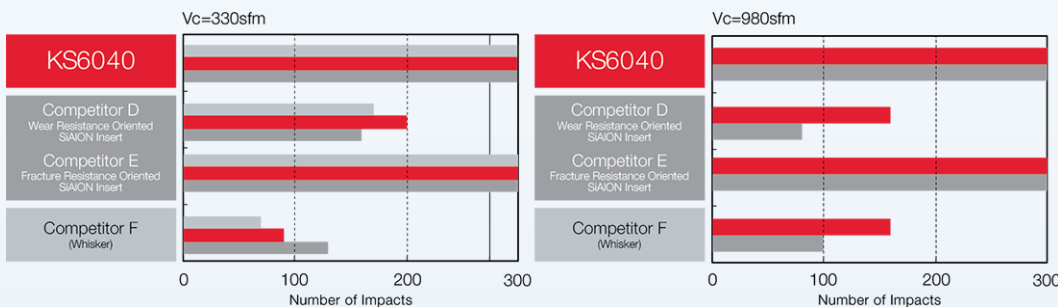
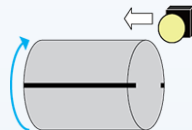


Hard Particle (Better Wear Resistance)

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	● ✱
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	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		○	
	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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