

NEW

New SiALON Grade for Machining HRSA materials

SX3

NTK's versatile SX3 grade has been developed to achieve a SiALON material composition with the ideal blend of excellent wear resistance and toughness to successfully machine a wide variety of HRSA materials

**Machined surface · semi-finishing
HRSA materials
(Wear resistance of SX7)**

**Forged surface HRSA materials
(Toughness of SX9 / SX5)**



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Features

- **Consistent in excellent wear resistance and toughness.**
Able to machine HRSA materials widely: Rough turning with scale ~ semi-finish turning.
- **Able to machine even the newest generation of HRSA materials (like Rene material) as well as today's most common HRSA materials; such as Inconel 718.**
- **Able to machine milling with high efficiency.**

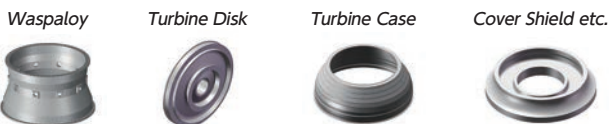
Stock list

Code	Std. Edge preparation
T00520	Chamfer 0.05mm × 20°
E004	Round honing R0.04

※Please order 10 each.

Shape	Part number		Dimensions (mm)		SiALON ceramic	
	ISO	Inch	I.C.	Thickness	SX3	Stock
	RNGN120400T00520	RNG43T0220	12.7	4.76	5997929	●
	RNGN120700T00520	RNG45T0220	12.7	7.94	5997945	●
	RNGN120700E004	RNG45E02	12.7	7.94	5997952	●
	RCGX090700T00520	RCGX35T0220	9.525	7.94	5998042	●
	RCGX120700T00520	RCGX45T0220	12.7	7.94	5998059	●
	RPGX090700T00520	RPGX35T0220	9.525	7.94	5998075	●
	RPGX120700T00520	RPGX45T0220	12.7	7.94	5998083	●

Recommended machined parts



Recommended work-materials

Inconel 718 Hastelloy
Waspaloy Rene(Rene65, Rene88, Rene130 etc..)

Case study

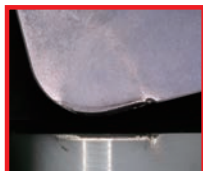
Work material : Rene130 Rough turning (eliminating scale)

	Conventional	NTK
Grade	SiALON Ceramic	SX3
Shape	SNGN190724	←
Cutting speed (m/min)	115	←
Feed (mm/rev)	0.15	←
Coolant	WET	←
Tool life (min)	10.0	←

Competitor's SiALON Ceramic



SX3



In turning rough surface, compared to competitor's SiALON, SX3 had no fracture and good condition.

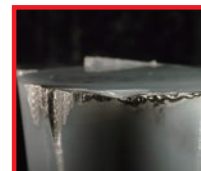
Work material : Rene130 Semi finish turning (machined surface)

	Conventional	NTK
Grade	SiALON Ceramic	SX3
Shape	RCGX120700	←
Cutting speed (m/min)	100	←
Feed (mm/rev)	0.25	←
Coolant	WET	←
Tool life (min)	10.0	←

Competitor's SiALON Ceramic



SX3



Competitor's SiALON fractured frequently, however SX3 and SX9 had good edge damage.