

NEW PRODUCT NEWS

T-TURN



Ceramic Grade

TC430

Whisker reinforced ceramic grade



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Ceramic grade TC430 Whisker reinforced ceramic grade

FEATURES

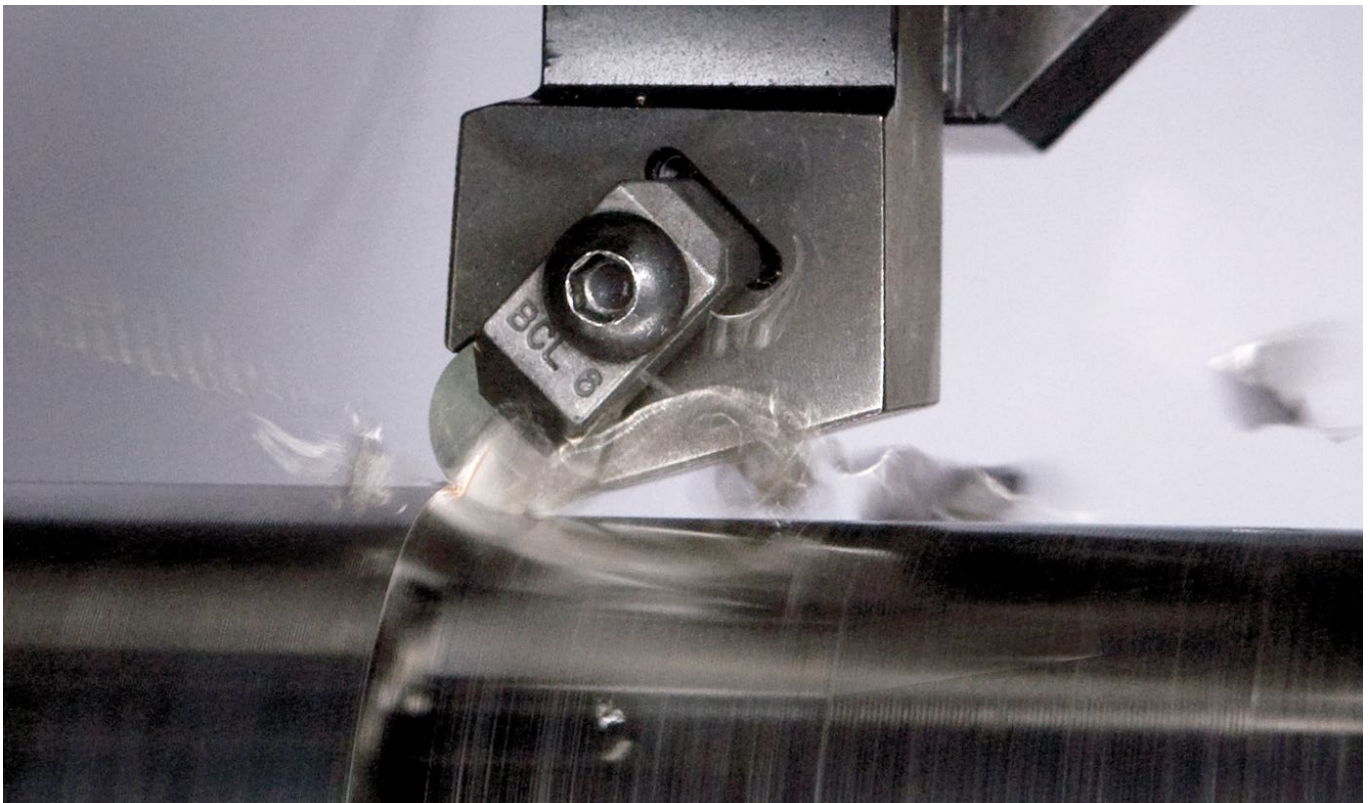
- SiC whisker reinforced ceramic grade
- High hardness and high fracture toughness levels
- Suitable for general turning and milling applications
- Ideal for machining Ni-based superalloys such as Inconel, Waspalloy, Rene as well as hardened steels and castings at extremely high cutting speeds.

A newly developed SiC whisker reinforced ceramic grade for machining high strength and high temperature alloy is now available from TaeguTec.

The TC430 has been developed for machining super alloys at high cutting speeds. With a composition of alumina (Al₂O₃) matrix and a strong oxidation resistance with its silicon carbide (SiC) whisker, the new grade offers exceptional toughness.

The TC430 can be applied to high temperature and high speed cutting conditions credit to its combination of micro-structural and chemical advantages that deliver excellent toughness and hardness levels when compared to other alumina based and silicon nitride based ceramics.

These features enable the TC430 grade to machine exotic materials such as Inconel, Stellite, titanium alloys, nickel and cobalt based alloys and also hardened steel and cast irons at very high cutting speeds.

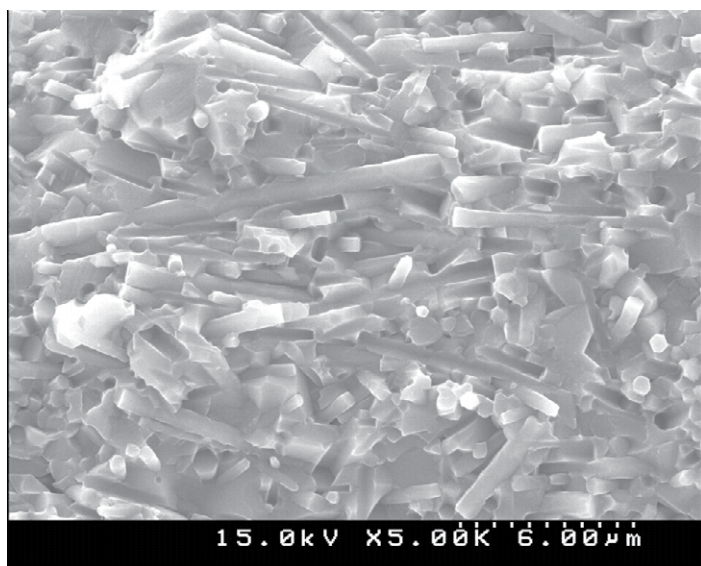


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Physical properties

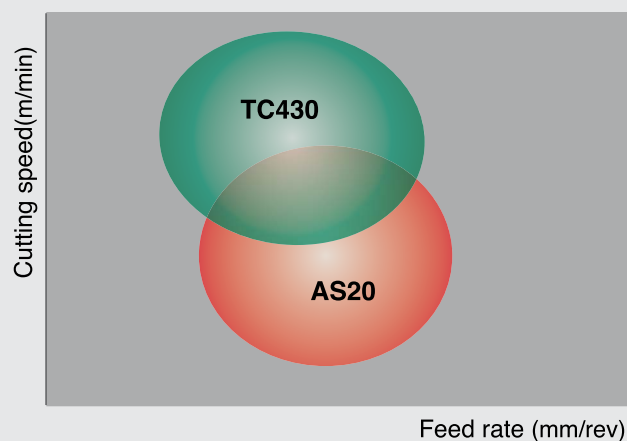
Density	Hardness (Hv)	Fracture toughness, KIC
3.7	2,050 ~ 2,100	4.5 ~ 5.5

Microstructure



Application range

Material: High temperature alloys

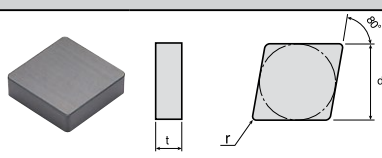
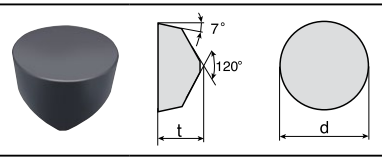
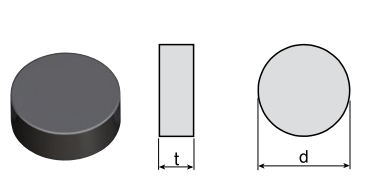
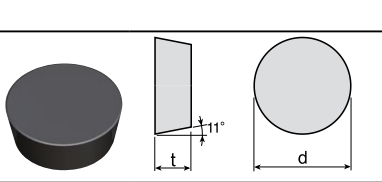
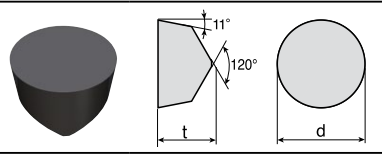
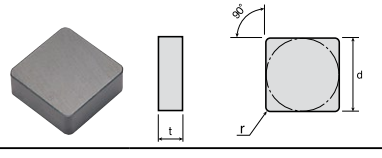


Recommended cutting conditions for high temperature alloys

	V (m/min)	F (mm/rev)
Turning	150 ~ 400	0.1 ~ 0.3
Milling	400 ~ 1,000	0.1 ~ 0.2

Insert

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Insert	Designation	Dimension(mm)			Grade
		d	t	R	TC430
	CNGN 120408 T6	12.70	4.76	0.8	●
	120412 T6	12.70	4.76	1.2	●
	120708 T6	12.70	7.94	0.8	●
	120712 T6	12.70	7.94	1.2	●
	RCGX 090700 T6	9.52	8.0	-	●
	120700 T6	12.70	8.0	-	●
	RNGN 090300 T6	9.52	3.18	-	●
	120400 T6	12.70	4.76	-	●
	120700 T6	12.70	7.94	-	●
	190700 T6	19.05	7.94	-	●
	RPGN 120400 T6	12.70	4.76	-	●
	RPGX 090700 T6	9.52	7.94	-	●
	120700 T6	12.67	7.94	-	●
	SNGN 120408 T6	12.70	4.76	0.8	●
	120412 T6	12.70	4.76	1.2	●
	120708 T6	12.70	7.94	0.8	●
	120712 T6	12.70	7.94	1.2	●

●Marked: Standard Items