

CBN



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KYOCERA CBN is second only to diamond in hardness. CBN (Cubic Boron Nitride) is a synthetically produced material with high thermal conductivity which provides stable cutting.

Features

- Superior wear resistance when cutting hardened materials
- Suitable for high speed cutting of cast iron and sintered steel
- High thermal conductivity provides stable cutting

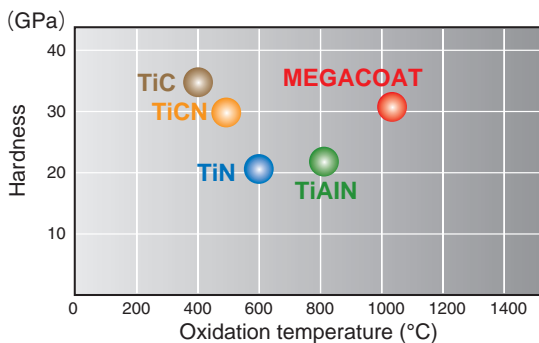
Features of CBN

Workpiece Material	Symbol	Color	Av. Grain Size (µm)	CBN Content Rate (%)	Hardness of Substrate (GPa)	Transverse Strength (MPa)	Advantages
H Hardened Materials	KBN510	Black	2	50	28	1,000	<ul style="list-style-type: none"> • Excellent wear resistance and crack resistance, non-coated CBN • Application: Finishing and continuous cutting of hardened die steel
	KBN525	Black	1 and under	45	25	1,250	<ul style="list-style-type: none"> • Good balance of toughness and wear resistance, non-coated CBN • Application: General grade for hardened steel, high stability at high speed and high feed cutting
	KBN05M (MEGACOAT)	Blackish red	0.5-1.5	55	27	1,000	<ul style="list-style-type: none"> • Heat-resistant MEGACOAT on highly heat-resistant CBN substrate • Application: High speed finishing of hardened steel
	KBN10M (MEGACOAT)	Blackish red	2	50	28	1,000	<ul style="list-style-type: none"> • Heat-resistant MEGACOAT on CBN with hard binder phase, superior anti-crater wear resistance • Application: High speed finishing of hardened die steel
	KBN25M (MEGACOAT)	Blackish red	1 and under	45	25	1,250	<ul style="list-style-type: none"> • Heat-resistant MEGACOAT on micro-grain CBN with heat resistant binder phase • Application: Stable cutting of hardened steel at high speed
	KBN30M (MEGACOAT)	Blackish red	1-4	65	30	1,350	<ul style="list-style-type: none"> • Heat-resistant MEGACOAT on tougher CBN • Application: Stable cutting of hardened steel for continuous to interrupted cutting
Sintered Steel	KBN65B	Black	2	85	32	1,150	<ul style="list-style-type: none"> • Excellent wear resistance due to CBN with heat-resistant binder phase, non-coated CBN • Application: Stable cutting of sintered steel (ferrous sintered alloy) at low speed
	KBN65M (MEGACOAT)	Blackish red	2	85	32	1,150	<ul style="list-style-type: none"> • Heat-resistant MEGACOAT on CBN with heat-resistant binder phase • Application: Stable cutting of sintered steel (ferrous sintered alloy) at low speed
	KBN70M (MEGACOAT)	Blackish red	2-4	90	34	1,350	<ul style="list-style-type: none"> • Heat-resistant MEGACOAT on CBN rich substrate • Application: General cutting of sintered steel (ferrous sintered alloy) at high speed
K Cast Iron	KBN60M (MEGACOAT)	Blackish red	0.5-6	80	33	1,250	<ul style="list-style-type: none"> • Heat-resistant MEGACOAT on CBN rich substrate with hard binder phase • Application: High speed finishing of gray cast iron
	KBN900 (TiN COAT)	Gold	9	90	31	1,050	<ul style="list-style-type: none"> • TiN coated solid CBN • Application: Heavy duty, interrupted cutting and finishing of hardened steel, hardened roll steel and cast iron

• For KBN35M, see page A13.

MEGACOAT CBN

Properties of PVD coated layer



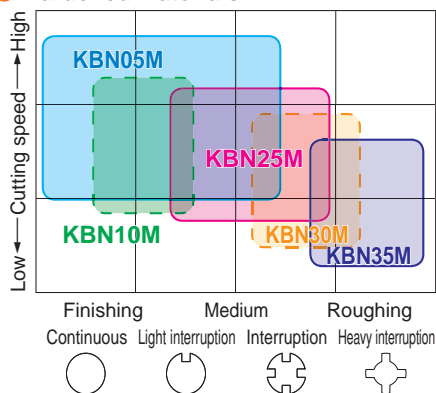
Advantages of MEGACOAT



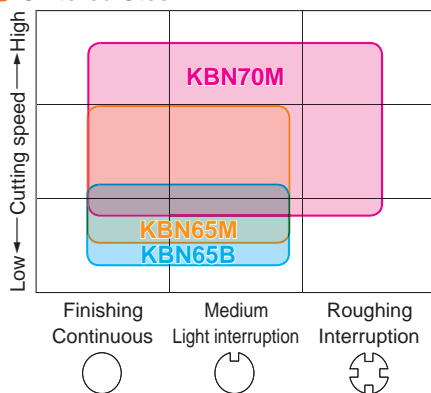
- Long tool life and stable cutting due to superior heat-resistance and hardness.
- Improvement of crater wear resistance.

Application Map

Hardened Materials



Sintered Steel



Cast Iron

