

# CBN INSERT GRADES

## CBN



### CBN

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

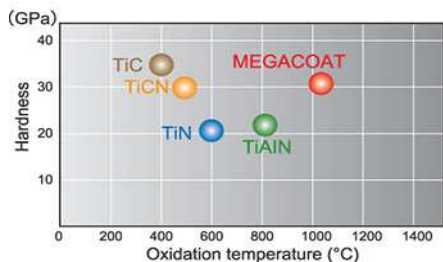
- Superior wear resistance when cutting hardened materials
- Suitable for high speed cutting of cast iron and sintered steel
- High thermal conductivity provides stable cutting

### FEATURES OF CBN

Material	Description	Color	Av. Grain Size (µm)	CBN Content Rate (%)	Hardness of Substrate (GPa)	Transverse Strength (MPa)	Advantages
<b>H</b> Hardened Materials	<b>KBN510</b>	Black	2	50	28	1,000	· Excellent wear resistance and crack resistance, non-coated CBN · Application: Finishing and continuous cutting of hardened die steel
	<b>KBN525</b>	Black	1 and Under	45	25	1,250	· 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
	<b>KBN05M</b> (MEGACOAT)	Blackish Red	0.5-1.5	55	27	1,000	· Heat-resistant MEGACOAT on highly heat-resistant CBN substrate · Application: High speed finishing of hardened steel
	<b>KBN10M</b> (MEGACOAT)	Blackish Red	2	50	28	1,000	· Heat-resistant MEGACOAT on CBN with hard binder phase, superior anti-crater wear resistance · Application: High speed finishing of hardened die steel
	<b>KBN25M</b> (MEGACOAT)	Blackish Red	1 and Under	45	25	1,250	· Heat-resistant MEGACOAT on micro-grain CBN with heat resistant binder phase · Application: Stable cutting of hardened steel at high speed
	<b>KBN30M</b> (MEGACOAT)	Blackish Red	1-4	65	30	1,350	· Heat-resistant MEGACOAT on tougher CBN · Application: Stable cutting of hardened steel for continuous to interrupted cutting
Sintered Steel	<b>KBN65B</b>	Black	2	85	32	1,150	· 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
	<b>KBN65M</b> (MEGACOAT)	Blackish Red	2	85	32	1,150	· Heat-resistant MEGACOAT on CBN with heat-resistant binder phase · Application: Stable cutting of sintered steel (ferrous sintered alloy) at low speed
	<b>KBN70M</b> (MEGACOAT)	Blackish Red	2-4	90	34	1,350	· Heat-resistant MEGACOAT on CBN rich substrate · Application: General cutting of sintered steel (ferrous sintered alloy) at high speed
<b>K</b> Cast Iron	<b>KBN60M</b> (MEGACOAT)	Blackish Red	0.5-6	80	33	1,250	· Heat-resistant MEGACOAT on CBN rich substrate with hard binder phase · Application: High speed finishing of gray cast iron
	<b>KBN900</b> (TiN COAT)	Gold	9	90	31	1,050	· TiN coated solid CBN · Application: Heavy duty, interrupted cutting and finishing of hardened steel, hardened roll steel and cast iron

### MEGACOAT CBN

#### Properties of PVD Coated Layer

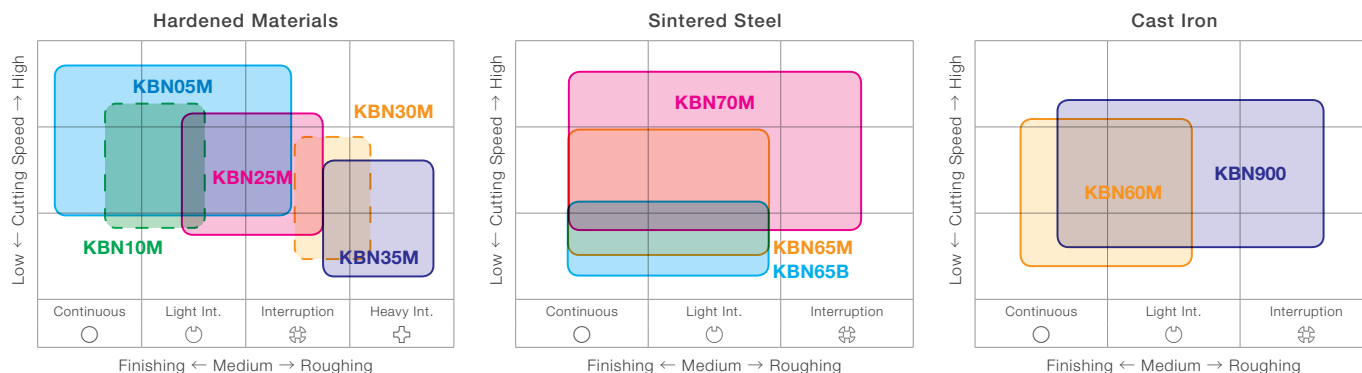


#### Advantages of MEGACOAT



- Long tool life and stable cutting due to superior heat-resistance and hardness
- Improvement of crater wear (oxidation, diffusional wear) resistance
- High thermal stability and surface smoothness provide excellent surface finish

### Application Map



GRADES A  
 INSERTS B  
 CBN & POD C  
 TURNING E  
 BORING F  
 GROOVING G  
 CUT-OFF H  
 THREADING J  
 SOLID END MILLS L  
 MILLING M  
 SPARE PARTS P  
 TECHNICAL R  
 INDEX T