



# PCBN

## Polycrystalline Cubic Boron Nitride

### IBON Series



[www.IJINDIAMOND.com](http://www.IJINDIAMOND.com)

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# IBON

## ILJIN Polycrystalline Cubic Boron Nitride

Type	Grade	Grain Size (µm)	cBN (Vol%)	Main Binder	Property	Applications	SEM
High cBN Content	■ K200	20	95	Al Alloy	Extreme wear resistance and toughness with coarse cBN grains. Provides even higher wear resistance than SB100	Rough machining of cast irons. Continuous machining of hardened steel and powder metal alloys	
	■ SB100	10	95	Al Alloy	Extreme wear resistance and toughness with coarse cBN grain	Rough machining of cast irons and powder metal alloys	
	■ SB95S2	2	95	Ti Alloy	Extreme wear resistance and high chipping resistance due to high cBN content and fine grain-size	Most kinds of cast irons, powder metal alloys and hardened steels	
	■ SB95N	3	95	Ti Alloy	Extreme wear and abrasion resistance	Most kinds of cast irons, powder metal alloys and hardened steels	
	■ SB75PS	1	75	TiN	Extreme chipping resistance and high wear resistance	Medium to heavy interrupted machining of hardened steel	
	■ SB75PC	1	75	TiN	Extreme chipping resistance and high wear resistance	Medium to heavy interrupted machining of hardened steel	
Low cBN Content	■ SB650	3	65	TiN	High chipping resistance and combination of wear resistance and thermal stability	Light to medium interrupted machining of hardened steel and high speed light interrupted machining	
	■ SBX6020	2	60	TiN	High chipping resistance and combination of wear resistance and thermal stability	Light to medium interrupted machining of hardened steel and high speed light interrupted machining	
	■ SB600	1	60	TiCN	Combination of wear resistance and thermal stability	Continuous to light interrupted machining of hardened steel	
	■ SBX5010	1	50	TiCN	Extreme thermal stability and high wear resistance	High speed continuous to light interrupted machining of hardened steel	
	■ SB75PS(C)	1	75	TiN	Extreme thermal stability and high wear resistance	High speed continuous to light interrupted machining of hardened steel	

Available Size

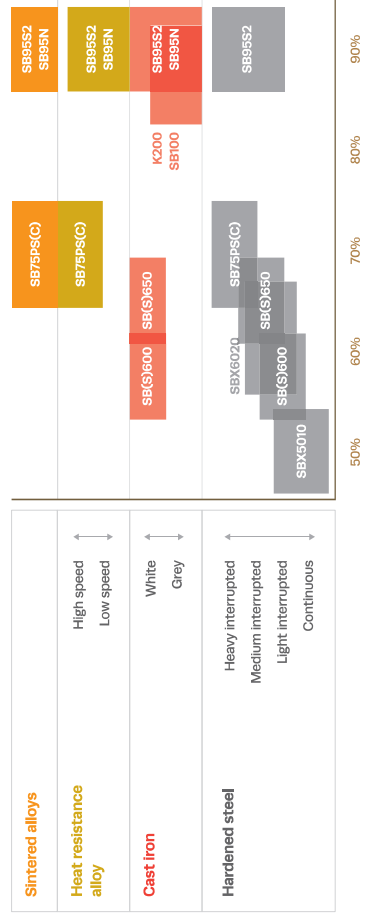
Carbide Backed Grade	cBN Thickness	Diameter (mm) Usable Area		Total Thickness (mm)				
		55	57	1.6	2.0	2.4	3.2	4.8
SB95N	0.75	0	0	0	0	0	0	0
SB95S2	0.9	0	0	0	0	0	0	0
SB75PC	0.9	0	0	0	0	0	0	0
SB650	0.75	0	0	0	0	0	0	0
SBX6020	0.9	0	0	0	0	0	0	0
SB600	0.75	0	0	0	0	0	0	0
SBX5010	0.9	0	0	0	0	0	0	0

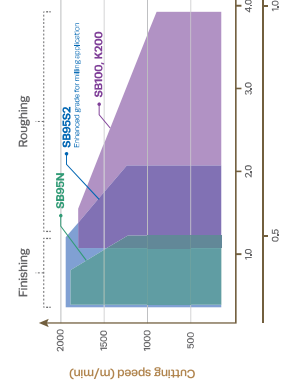
Solid Grade	cBN Thickness	Diameter (mm) Usable Area		Total Thickness (mm)				
		55	57	1.6	2.0	2.4	3.2	4.8
K200	Solid	20µm	0	0	0	0	0	0
SB100	Solid	10µm	0	0	0	0	0	0
SB75PS	Solid	1µm	0	0	0	0	0	0
SB650	Solid	3µm	0	0	0	0	0	0
SB600	Solid	1µm	0	0	0	0	0	0

\* High content Solid PCBN (K200 & SB100) is typically supplied as a laser-cut product, e.g. semi-finished insert size.  
 Other grades can be supplied as either discs or cut-pieces (by WEDM).  
 \* Special sizes are also available on request.

### The PCBN Selecting Guide



### Cutting Condition of High cBN Content



### Cutting Condition of Low cBN Content

