

ADICO high content PCBN



ADICO offers top quality Polycrystalline Cubic Boron Nitride(PCBN) blanks in 3 different product configurations; **Single layer PCBN** with a WC substrate, **Double layer PCBN** with WC intermediate layer, and **Solid PCBN**.

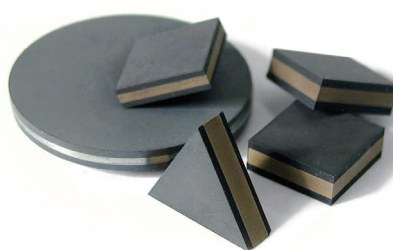
3-different Adico PCBN Product Configurations

ATN-series
(Single PCBN-layer)



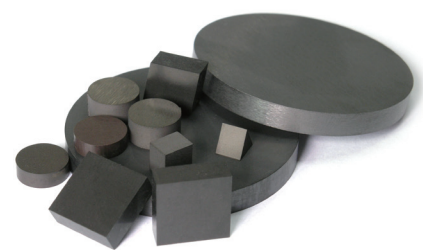
Blank Sizes
Diameter (mm): 61.0
Thickness (mm): 1.6, 2.0, 2.4, 3.2, 4.8

ADN-series
(Double PCBN-layer)



Blank Sizes
Diameter (mm): 61.0
Thickness (mm): 3.2, 4.8, 6.4

ASN-series
(Solid PCBN-layer)



Blank Sizes
Diameter (mm): 55.0
Thickness (mm): 3.3, 5.0

ADICO PCBN GRADES

The composition and mechanical properties of Adico PCBN have been carefully chosen in order to optimize the cutting tool performance in targeted machining applications. This has been achieved during synthesis, by varying the CBN volume%, the CBN grain size, and the chemical composition of the matrix.

High content PCBN

PCBN	CBN [vol%]	CBN size [μm]	Main Binder	Comment
ATN10	95	3	Co, Al	standard
ATN10N <i>NEW</i>	95	3	Co, Al, X	higher wear resistance
AN95 <i>NEW</i>	95	2	Co, Al, X	higher toughness
ATN16	90	1	Co, Al	standard
AN90 <i>NEW</i>	90	1	Co, Al, X	higher toughness

X: optimized process

ADICO PCBN Cutting Tool Product Application Areas

The range of workpiece materials that Adico PCBN can successfully machine is constantly expanding, but the main material groups are:

- | | |
|------------------------------|---|
| 1. Hardened steels | 5. Sintered iron |
| 2. Hard facing alloys | 6. Superalloys e.g. Inconel 718 |
| 3. Chilled cast iron | 7. Powder metal e.g. automotive valve seats |
| 4. Pearlitic grey cast irons | |

ADICO PCBN Products

Successful machining applications have been established in the automotive, aerospace, and manufacturing industries, and some examples are:

High content PCBN

- | | |
|-------------------|---|
| ATN10 | • gray cast iron cylinder boring (GG 20/25) |
| ATN10N NEW | • nodular cast iron tuning (GGG50, 38-42 HRC with good cylindricity & |
| AN95 NEW | higher feed rates than other tools) |
| ATN16 | • brake drum tuning (GG20) |
| AN90 NEW | • TiAl6V4 exceptionally good for tuning applications |
| | • internal gear tuning with very good surface finish |
| | • ball nose end milling (CF53, 62HRC) with extremely high edge-stability and better surface quality |
| | • sintered geared tuning (SK72-01, 60HRC) |