

NexGen Coatings | **CVD Diamond Coatings** 
PVD Coatings
Optimised for Micro Tools



NexGen PVD Coatings



Coatings optimized with extremely smooth surface for frictionless chip removal along flutes / cutting edges

AXIS Coatings	Composition	Coating Class	Coating Structure	Color	Micro Hardness (HV0.05)	Max. Application Temperature (°C)	Friction Coefficient against steel
AxiCoat - TiN	TiN	SUPERNITRIDE	NANOCOMPOSITE	GOLD	2800	700	0.5
AxiCoat - TiAlN	TiAlN	SUPERNITRIDE	NANOCOMPOSITE	ANTHRACITE - BLACK	3500	1000	0.6
AxiCoat - AlTiN	AlTiN	SUPERNITRIDE	NANOCOMPOSITE	ANTHRACITE - BLACK	3700	1100	0.5
AxiCoat - AlCrN	AlCrN	SUPERNITRIDE	NANOCOMPOSITE	GREY	3200	1050	0.55

Available coating thickness 1 - 6 micron.

AxiCoat - TiN

Applications

- Brass
- Steels

Features

- Inert and stable material
- Electrically conductive and non-oxidizing
- Resistant to most chemicals
- Conductive – does not oxidize
- Low fatigue – very high compressive stress
- Non-toxic and FDA compliant for implant use

AxiCoat - TiAlN

Applications

- Steels
- Cast Irons
- Stainless Steels
- High temperature alloys

Features

- Enhanced temperature capability
- Extremely high hot hardness
- Thin to thick typically 1.5 to 10 µm
- Environment friendly process

- NexGen Coating Processes
- Very Strong Adhesion
- Droplet free surface
- Extremely low co-efficient of friction

AxiCoat - AlTiN

Applications

- Hardened Steels
- High strength materials
- Difficult to machine materials

Features

- Enhanced temperature capability
- Extremely high hot hardness
- Thin film typically 3 to 6 µm thick
- Environment friendly process

AxiCoat - AlCrN

Applications

- Steels up to 52 HRC
- Cast Irons

Features

- Coating for dry and lubricated cutting conditions
- Increased productivity of cutting tools across wide range of work materials
- Can work in a wide range of cutting speeds and feeds

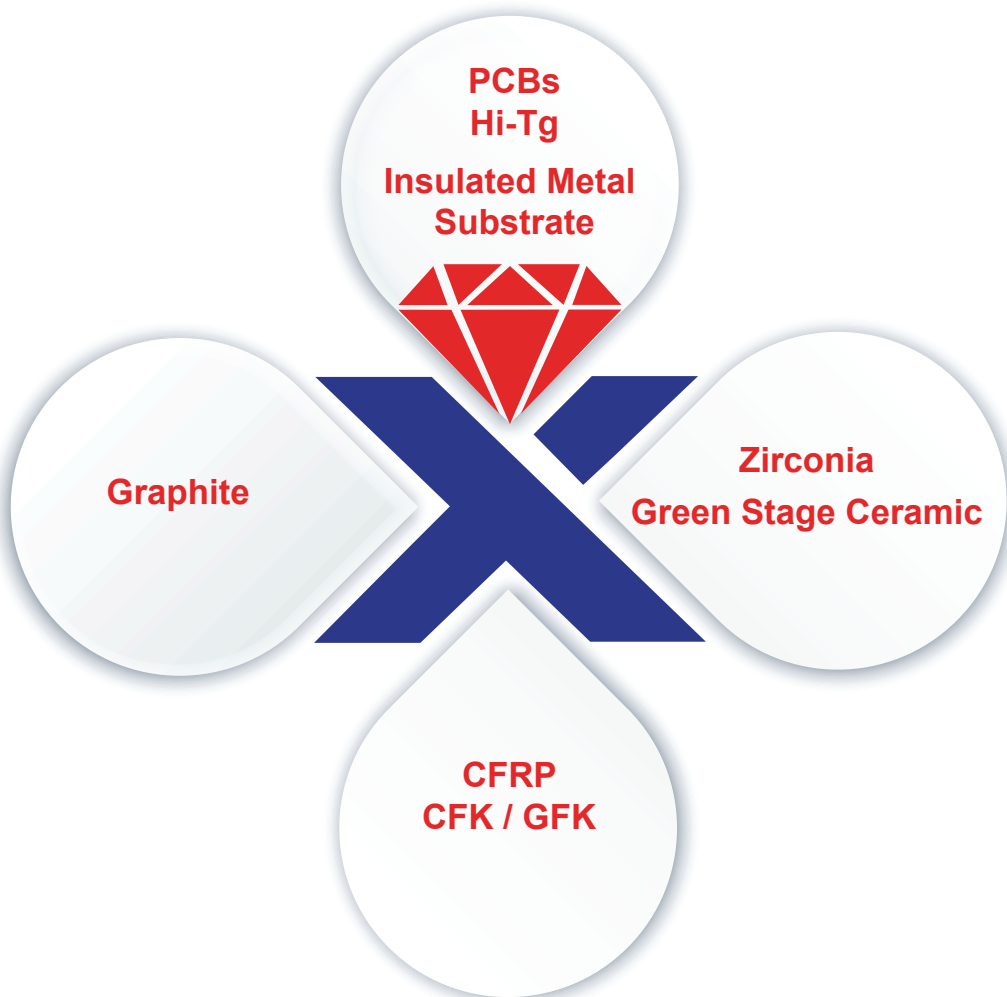
NexGen CVD Diamond Coatings

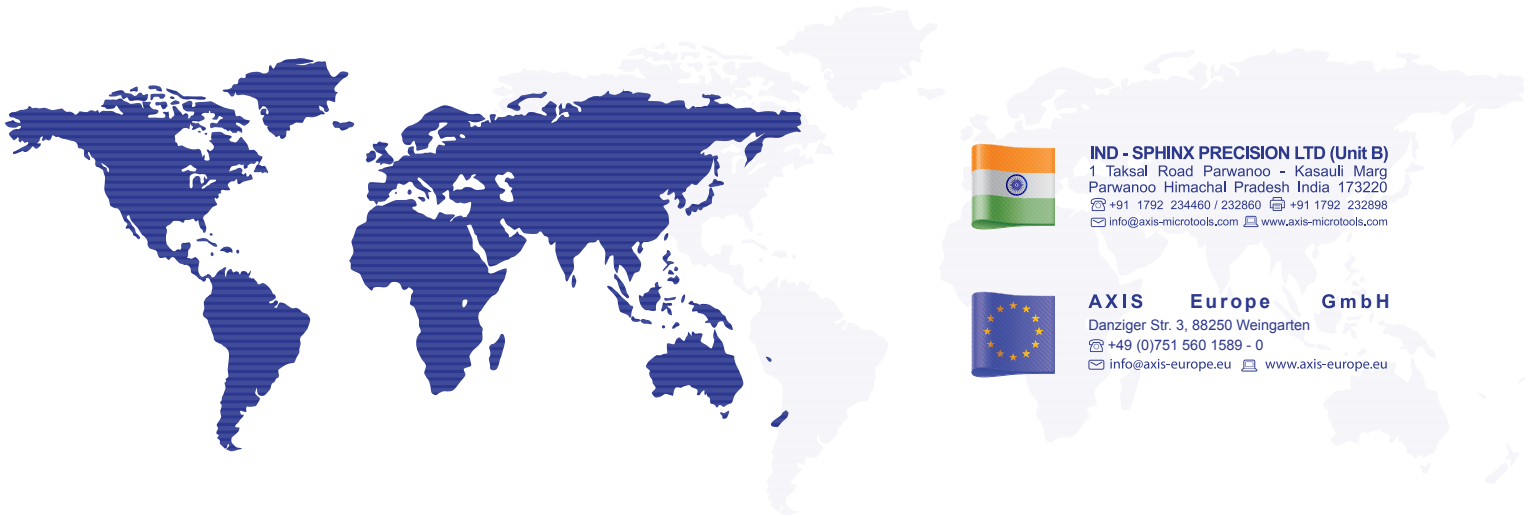


Technical Data

Micro hardness	10,000 HV	NexGen CVD Diamond Coatings with thicknesses ranging from 5 micron to 50 micron with customised processes to suit applications like Hi-Tg PCBs, Insulated Metal Substrate/IMS PCBs, Dental CAD / CAM applications, Green Ceramics, Graphite, CFRP / GFRP / other composites.
Composition	Multilayer, sp ³	
Color	Grey	
Max. operating temperature	650 °C	

Available coating thickness ~3 - 14 micron.





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