

neoDiam®-Decorative

Features and descriptions

neoDiam® decorative diamond coatings find their applications in luxury and watch industries

Beside its increasing use in various technical applications and growing use in jewelry, CVD diamond can also be used successfully for various aesthetic purposes which find their applications in luxury and high-end watch industries.

Thin colored neoDiam® coatings

Thanks to a precise proprietary nanoseeding together with a dedicated Hot Filament CVD process, NeoCoat is able to grow very thin neoDiam® coatings with an accurate controlled thickness on various substrate materials.

When applied in very thin homogeneous films of 50nm to 500nm diamond exhibits a complete range of interferential colors. This is the property used by NeoCoat to grow diamond coating of many different colors.



Colored neoDiam® coating data

Hardness	up to 10'000 HV
Thickness	from 50nm to 500nm
Microstructure	Polycrystalline
Substrate material	Silicon, ceramics, refractory metals
Geometry	2D (plate or disk) / 3D (cylinder, dome, pyramid...)



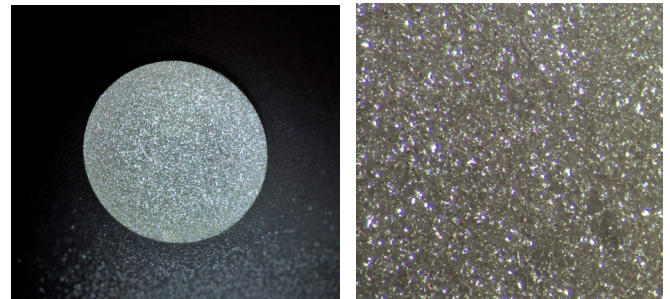
CVD diamond films for decorative applications

Thick shiny neoDiam® films

With its microwave plasma CVD technology, NeoCoat grows very thick polycrystalline neoDiam® diamond coatings, which have very large grain size and exhibit a highly attractive shiny effect.

Shiny neoDiam® coatings can be offered:

- as-grown on a substrate (dark grey shiny effect) ;
- as a diamond free-standing plate after a controlled release of the diamond from the substrate (transparent crystalline shiny effect) ;
- as free-standing diamond with a backside coating (benefit of the shiny transparency coupled with an additional color effect).



Shiny neoDiam® film data

Hardness	up to 10'000 HV
Thickness	from 100µm to > 1mm
Grain size	up to more than 100µm
Microstructure	Polycrystalline
Substrate material	No substrate, silicon, ceramics, refractory metals

neoDiam®-Decorative applications

- Watch dials: DiamonDial™ (patent pending)
- Massive parts for watches
- Decorative coatings for luxury
- Fashion items