

DLC Coating

Procedure:

In the case of the DLC coating (Diamant Like Carbon), a diamond-like carbon is applied to the material to be processed by the PVD/PACVD process. This is possible with different materials.

The Advantages:

- Reduction of energy consumption due to reduced friction values
- High corrosion resistance to alkalis, acids and salts
- High temperature resistance, depending on the base material up to 350 °C
- High degree of hardness
- Due to the biocompatibility, the use in the food industry and in the medical field is possible

Use:

Various metals, ceramics, cutting tools and some types of plastics

Characteristics:

Deposition temperature (°C)	<180
Microhardness (HV 0,05)	>3000
Thickness (µm)	<3
Friction coefficient* (-)	0,05...0,015
Max. operating temperature (°C)	350
Coating material	a-C/a-C:H
Abrasive wear resistance	+++
Corrosion resistance	+++
Coating color	black gray

Hints:

- *coefficient of friction against steel (100Cr6), measured in the sliding wear test ball/disc-tribometer, unlubricated
- The color can shimmer in the light, by its small thickness also from green to red