



DLC LAFER

a-C:H

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DLC lafer is a **carbon-based DLC coating**: the low deposition temperature, the coefficient of friction among the lowest in PVD coatings, the high H/E ratio, indication of excellent wear and fatigue resistance, are just few of the many features that make **this coating be on the cutting edge compared to its competitors.**



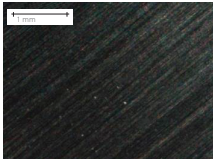
MAIN APPLICATION

- Components subject to sliding and heavy abrasive wear
- Moulds for ABS, HDPE, PC and PET
- Beryllium copper alloy plastic moulds
- Tools for machining of plastic materials and aluminium
- Automatic machines components for the food industry
- Deformation and shearing of aluminum alloys
- Engine parts: camshafts, pistons, piston pins, tappets
- Medical devices and medical tools

COATING PROPERTIES

VISUAL FEATURES

Surface



Values	Measurement parameters of color According to ISO11664-4
45 ÷ 50	L* Brightness
-0,5 ÷ 0,5	a* Color coordinate
-0,5 ÷ 1,5	b* Color coordinate

45 ÷ 50

L* Brightness

-0,5 ÷ 0,5

a* Color coordinate

-0,5 ÷ 1,5

b* Color coordinate

NOTES:

Non-functional requirement, indicative values

PHYSICAL FEATURES

Measure	Values	Measurement
Coating thickness*	2 ÷ 4 µm	Calotest on sample
Coating hardness***	2000 ± 200 HV	Nanoindentation 6mN/20s
Roughness Ra**	0,02 ÷ 0,04 µm	From sample with Ra < 0,03µm
Coefficient of friction**	0,05 ÷ 0,1	Pin on disk, dry, against Al ₂ O ₃

NOTES:

* depends on the application.

** depends on the test conditions.

TECHNOLOGICAL FEATURES

Coating technology	PACVD
Chemical composition	a-C:H
Structure	Multilayer
Coating temperature	180°C
Maximum working temperature	250°C
Biocompatibility	Non-cytotoxic according to ISO10993-5:2009 Meets the requirements of the intracutaneous reactivity test according to ISO10993-10:2010
Food compatibility	Complies with EC Regulation No 1935/2004