# DLC LAFER

a-C:H

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Azienda con sistema di gestione qualità certificato da
TÜV Italia Srl secondo la norma ISO9001.

Lafer
RIVESTIMENTI PVD-CVD-DLC

Doc. SpT_DLC_ENG
Rev. 5 date 31/03/2017

# DLC LAFER

**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**.

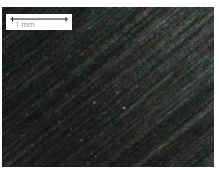
## MAIN APPLICATION

- 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
- 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 |

**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 $Al_2O_3$ |

**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 | 300°C |
| Biocompatibility | Non-cytotoxic according to ISO10993-5:2009<br>Meets the requirements of the intracutaneous reactivity test according to ISO10993-10:2010 |
| Food compatibility | Complies with EC Regulation No 1935/2004 |