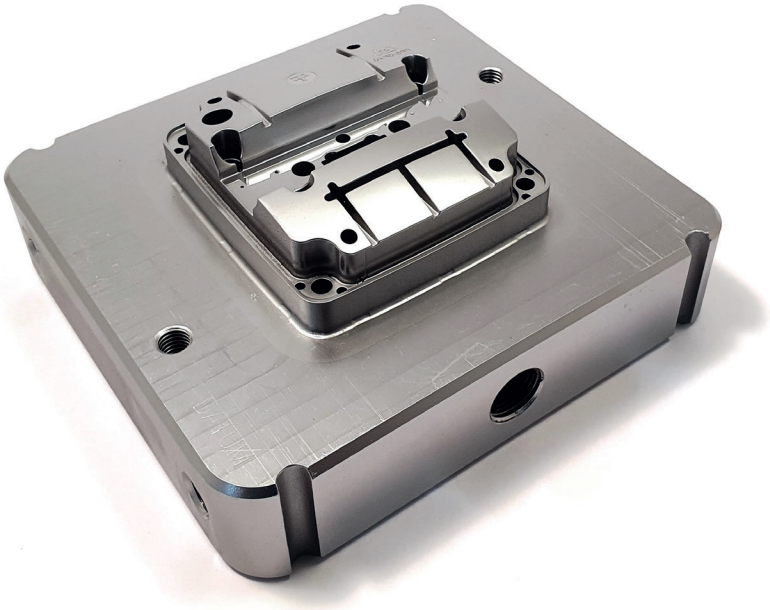


SUPERLATTICE

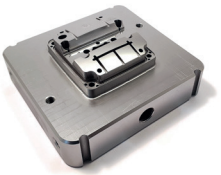
CrN / NbN

Lafer S.p.A. – Strada di Cortemaggiore 31, 29122 Piacenza.
Tel. 0523 517940 – info@lafer.eu – www.lafer.eu
Capitale sociale € 1.040.000 i.v. – R.E.A. 80708
P.IVA/C.F./R.I. Piacenza/CEE IT 00122880339
Azienda con sistema di gestione qualità certificato da
TÜV Italia Srl secondo la norma ISO9001 e da IMQ SpA
secondo la norma ISO13485.

RIVESTIMENTI PVD-CVD-DLC

Doc. SpT_SLC_ENG
Rev. 4 date 14/07/2016

SUPERLATTICE



Superlattice Lafer is the **evolution of Chromium Nitride**: it is characterized by a structure of 1200 alternating nanolayers of **Chromium Nitride** and **Niobium Nitride** deposited at low temperature and with reduced internal stresses. Its physical properties, such as high hardness, low friction coefficient and excellent corrosion resistance, guarantee excellent performance not only in the field of plastic molding, but also in other areas of mechanics. It gives, in fact, excellent results also as anti-wear coating of automatic machine components in the food, pharmaceutical and medical sectors.

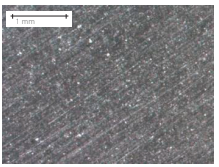
MAIN APPLICATION

- Molding of thermosetting materials
- Molding and extrusion of plastics
- Mechanical components of automatic machines also for the food and medical industry
- Machining of copper alloys and plastics

COATING PROPERTIES

VISUAL FEATURES

Surface



Values	Measurement parameters of color According to ISO11664-4
70 ÷ 90	**L*** Brightness
-1 ÷ 1	**a*** Color coordinate
-3 ÷ 4	**b*** Color coordinate

NOTES:
Non-functional requirement, indicative values

PHYSICAL FEATURES

Measure	Values	Measurement
Coating thickness*	2 ÷ 6 µm	Calotest on sample
Coating hardness***	2500 ± 200 HV	Nanoindentation 20mN/20s
Roughness Ra**	0,08 ÷ 0,10 µm	From sample with Ra < 0,03µm
Coefficient of friction**	0,3 ÷ 0,4	Pin on disk, dry, against Al_2O_3

NOTES:
* depends on the application.
** depends on the test conditions.

TECHNOLOGICAL FEATURES

Coating technology	Arc
Chemical composition	CrN / NbN
Structure	Nanolayer
Coating temperature	280°C
Maximum working temperature	850°C
Biocompatibility	Non-cytotoxic according to ISO10993-5:2009
Food compatibility	Complies with EC Regulation No 1935/2004