DUPLEX TIGRAL
AlTiCrN

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.

Lafer
RIVESTIMENTI PVD-CVD-DLC

DUPLEX TIGRAL

Tigral coating, based on **AlTiCrN**, is the Lafer solution for die-casting aluminium, zamak and magnesium. Its composition is ideal for solving **metallization problems**. It allows you to combine the **high wear resistance**, typical of coatings containing cormo, with that at high temperatures, typical of coatings containing aluminum.
The **Duplex Tigral** version combines the benefits of coating with those of **ion nitriding**, **further increasing the wear resistance** and **thermal fatigue resistance** of the steel.

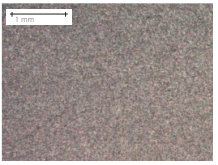
MAIN APPLICATION

- ZAMAK die casting and aluminum alloys
- Magnesium and aluminium hot moulding
- Die casting mould components of Aluminium and Magnesium alloys

COATING PROPERTIES

VISUAL FEATURES

Surface



Values	Measurement parameters of color According to ISO11664-4
55 ÷ 60	**L*** Brightness
0 ÷ 1	**a*** Color coordinate
0 ÷ 1	**b*** Color coordinate

NOTES:
Non-functional requirement, indicative values

PHYSICAL FEATURES

Measure	Values	Measurement
Spessore strato nitrurato***	50 ÷ 80 µm	Metallographic sectioning
Coating thickness*	3 ÷ 5 µm	Calotest on sample
Coating hardness***	2800 ± 200 HV	Nanoindentation 20mN/20s
Roughness Ra**	0,07 ÷ 0,09 µm	Starting from substrate roughness Ra < 0,03µm
Coefficient of friction**	0,6 ÷ 0,7	Pin on disk, dry condition, Al_2O_3 counterpart

NOTES:
* depends on the application.
** depends on the test conditions.
*** depends on the substrate steel, without white layer.

TECHNOLOGICAL FEATURES

Coating technology	Arc
Chemical composition	AlTiCrN
Structure	Ion nitriding + Multilayer (obtained in unique process in the PVD machine)
Coating temperature	420°C
Maximum working temperature	1100°C
Biocompatibility	-
Food compatibility	-