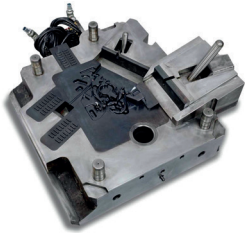


DUPLEX KRONOS

AlCrN

DUPLEX KRONOS



Kronos coating, based on **AlCrN**, 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 Chromo, with that at high temperatures, typical of coatings containing aluminium.

The **Duplex Kronos** version combines the benefits of coating with those of ion nitriding, **further increasing the wear resistance and thermal fatigue resistance** of the steel.

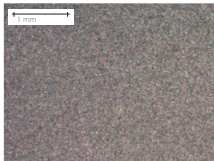
MAIN APPLICATION

- 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
53 ÷ 57	L* Brightness
-1 ÷ 0	a* Color coordinate
-3 ÷ -1	b* Color coordinate

NOTES:

Non-functional requirement, indicative values

PHYSICAL FEATURES

Measure	Values	Measurement
Nitriding thickness***	50 ÷ 80 µm	Metallography
Coating thickness*	2 ÷ 6 µm	Calotest on sample
Coating hardness***	3000 ± 200 HV	Nanoindentation 20mN/20s
Roughness Ra**	0,15 ÷ 0,20 µm	Starting from substrate roughness Ra < 0,03µm
Coefficient of friction**	0,5 ÷ 0,6	Pin on disk, dry condition, Al ₂ O 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	AlCrN
Structure	Plasma nitriding + Single layer
Coating temperature	450°C
Maximum working temperature	1100°C
Biocompatibility	-
Food compatibility	-