



**RED SPEED**

TiAlCN

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**Red Speed Lafer** is a **TiAlCN coating** used successfully in wet chip removal on medium low strength steels, both in interrupted and continuous cutting conditions. Its **multilayer structure** has been developed to ensure maximum adhesion and to withstand the most severe mechanical stresses, while the red functional outer layer **guarantees a lower resistance to chip sliding**.

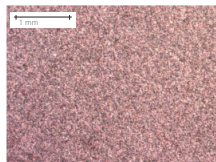
### MAIN APPLICATION

- HM and HSS tools for milling and drilling with medium cutting parameters for interrupted cutting
- Non cytotoxic coating according to ISO 10993 5:2009
- Medical components
- Used in the food industry
- Cold forming of stainless steel sheet and high resistance sheet

## COATING PROPERTIES

### VISUAL FEATURES

#### Surface



Values	Measurement parameters of color According to ISO11664-4
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55 ÷ 65	L* Brightness
9 ÷ 13	a* Color coordinate
5 ÷ 10	b* Color coordinate

**NOTES:**  
 Non-functional requirement, indicative values

### PHYSICAL FEATURES

Measure	Values	Measurement
Coating thickness*	2 ÷ 7 µm	Calotest on sample
Coating hardness***	3200 ± 200 HV	Nanoindentation 20mN/20s
Roughness Ra**	0,08 ± 0,18 µm	From sample with Ra < 0,03µm
Coefficient of friction**	0,2 ÷ 0,5	Pin on disk, dry, against Al <sub>2</sub> O <sub>3</sub>

**NOTES:**

- \* depends on the application.
- \*\* depends on the test conditions.

### TECHNOLOGICAL FEATURES

Coating technology	Arc
Chemical composition	TiAlCN
Structure	Multilayer
Coating temperature	450°C
Maximum working temperature	600°C
Biocompatibility	Non-cytotoxic according to ISO10993 5:2009
Food compatibility	-