

ALCROSS HiPIMS

AlCrN

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Alcross is the new AlCrN-based coating, deposited with HiPIMS technology and developed to extend life of cylindrical cutting tools for dry and wet machining of steels.

Its **high hardness and thermal shock stability** make it the ideal coating solution for machining operations at high cutting parameters.

HiPIMS deposition technology also guarantees **extremely low surface roughness**, improving chip evacuation and surface finishing of the machined part.

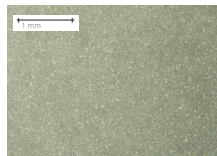
MAIN APPLICATION

- Dry and wet machining of normal and mild steels with high cutting parameters

COATING PROPERTIES

VISUAL FEATURES

Surface



Values	Measurement parameters of color According to ISO11664-4
53 ± 1.5	L* Brightness
0 ± 1.5	a* Color coordinate
1 ± 1	b* Color coordinate

NOTES:

Non-functional requirement, indicative values

PHYSICAL FEATURES

Measure	Values	Measurement
Coating thickness*	$3.0 \pm 1.0 \mu\text{m}$	Calotest on sample
Coating hardness***	$2700 \pm 200 \text{ HV}$	Nanoindentation 20mN/20s
Roughness Ra**	$0.08 \mu\text{m}$	From sample with Ra < 0,03μm
Coefficient of friction**	0.65 ± 0.1	Pin on disk, dry, against Al ₂ O ₃

NOTES:

* depends on the application.

** depends on the test conditions.

TECHNOLOGICAL FEATURES

Coating technology	HiPIMS
Chemical composition	AlCrN-based
Structure	Monolayer
Coating temperature	450°C
Maximum working temperature	1000°C
Biocompatibility	-
Food compatibility	-