


	Titanium Aluminum Nitride	Titanium Aluminum Carbo-Nitride	Aluminum Titanium Carbo-Nitride	Aluminum Titanium Silicon Nitride
Coating Material	TiAlN(ML)	TiAlCN(ML)	AlTiN	AlTiSiN
Microhardness HV0.05	3500±500	3500±500	3000±300	4250±250
Friction Coefficient Against Dry Steel	0,7	0,2	0,2	n/a
Coating Thickness in Microns (µm)	2-4	2-4	2-4	2-4
Thermal Threshold	800° C 1470° F	800° C 1470° F	800° C 1470° F	1000° C
Color of the Coating				
Key Characteristics	Excellent oxidation resistance	Excellent oxidation and abrasion resistance	High hardness, elasticity, low friction, high oxidation resistance	Excellent chemical and thermal stability
Primary Applications	<ul style="list-style-type: none"> Multilayer coating for a wide range of carbide, cermet and high speed steel tooling Excellent for machining cast iron, stainless steel and nickel based high temperature alloys 	<ul style="list-style-type: none"> Multilayer coating for a wide range of carbide, cermet and high speed steel tooling Excellent for drilling operations in steel Excellent for machining all types of steel under dry as well as wet machining conditions 	<ul style="list-style-type: none"> Excellent for stainless steel and nickle-based high temperature alloys Hard and copy milling Interrupted cutting operations, lubricated, semi-dry or dry machining 	<ul style="list-style-type: none"> Excellent for machining cast iron and hardened steels Diecasting High speed applications dry or semi dry