



PVD COATING PROCESS DATASHEET

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Coating Process	Cathodic Arc									Nano-Tek	Nano-Tek/Cr
	TiN ¹	TiCN	TiCN-MP	TiAlCN	TiAlN	AlTiN	ZrN	CrN ¹	CBC	AlTiN/Si ₃ N ₄	AlCrN/Si ₃ N ₄
Coating	TiN ¹	TiCN	TiCN-MP	TiAlCN	TiAlN	AlTiN	ZrN	CrN ¹	CBC	AlTiN/Si ₃ N ₄	AlCrN/Si ₃ N ₄
Structure	Monolayer	Gradient	Gradient	Gradient	Multilayer	Gradient	Monolayer	Monolayer	Gradient	Nano-composite	Nano-composite
Nanohardness (GPa)	24	37	32	28	28	38	20	18	20	45	42
Friction (fretting) coefficient	0.55	0.2	0.2	0.3	0.6	0.7	0.4	0.3	0.15	0.45	0.35
Thickness (µm) <small>(depends on application)</small>	1-5	1-4	1-4	1-4	1-4	1-3	1-4	1-4	0.5-1.5	1-4	1-5
Maximum Working Temperature	600° C (1110° F)	400° C (750° F)	400° C (750° F)	500° C (930° F)	700° C (1290° F)	900° C (1650° F)	550° C (1020° F)	700° C (1290° F)	400° C (750° F)	1200° C (2190° F)	1100° C (2010° F)
Color	golden yellow	blue-gray	light red	red-copper	violet	blue-black	pale yellow	silver	charcoal gray	blue-black	silver-gray

Standard coating process temperature is 475° C (890° F).
¹Special low temperature processes available. Please inquire.