



COATING SELECTION CHART

DCT can provide over 157 coating formulations, including a first class alternative to TiB2

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COATING NAME	COATING COLOR	HARDNESS (HV)	COATING THICKNESS (μ = MICRONS)	COEFFICIENT OF FRICTION (COF)	COATING TEMP (F)	DEFINITION AND COMMON USE Call us for assistance in coating selection
TiN (Titanium Nitride)	Gold	2300-2500	Industry Standard: 2.2 μ - 3.2 μ Maximum Range: 1-8 μ DCT Tolerance: 2.5 μ +/- 20%	0.4	700	Great general purpose coating, a proven starter coating for numerous applications (common use: machining ferrous materials, molding, medical industry) <i>NOTE: Can be stripped and reapplied to add life to expensive components.</i>
TiCN (Titanium Carbo Nitride)	Rose	2800-3200	Industry Standard: 2.5 μ - 3.5 μ Maximum Range: 1-8 μ DCT Tolerance: 2.8 μ +/- 20%	0.3	800	Improved hardness, toughness, wear resistance over TiN with very low COF (common use: stamping, punching, blanking, forming tools, tough machining, injection molding. <i>NOTE: Can be stripped and reapplied to add life to expensive components.</i>
TiAlN (Titanium Aluminum Nitride)	Dark Gray	2900-3100	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1-5 μ DCT Tolerance: 2.4 μ +/- 20%	0.35	850	Forgiving coating with high surface hardness at elevated temp (common use: machining difficult materials, dry or high temp. machining, fast feed rate machining, die cast core pins) <i>NOTE: Can be stripped and reapplied to add life to expensive components.</i>
AlTiN (Aluminum Titanium Nitride)	Dark Gray	3000-3400	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1-5 μ DCT Tolerance: 2.5 μ +/- 20%	0.35	800	Versatile coating, low COF, higher breakdown temp. than TiAlN (common use: dry machining, high temp. machining, fast feed rate machining, hot forging)
TiAlSiN (Titanium Aluminum Silicon Nitride)	Gray	3200-3500	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1-4 μ DCT Tolerance: 2.5 μ +/- 20%	0.35	850	Extremely hard and tough, higher breakdown temp than TiAlN/AlTiN, excellent wear resistance when post treated by DCT (common use: machining cast iron. Any tough application in high temperatures, high temp drilling) <i>NOTE: Can be stripped and reapplied to add life to expensive components.</i>
ZrN (Zirconium Nitride)	Pale Gold	2300-2500	Industry Standard: 2.2 μ - 3.8 μ Maximum Range: 1-5 μ DCT Tolerance: 3.0 μ +/- 20%	0.35	600	Exceptional abrasion resistance and lubricity (common use: General purpose machining, medical)
CrN (Chromium Nitride)	Silver	1800-2100	Industry Standard: 2.2 μ - 3.8 μ Maximum Range: 1-5 μ DCT Tolerance: 3.0 μ +/- 20%	0.45	700	Great sliding wear resistance, ductile and helps prevent cold welding similar in use to hard chrome plating (common use: machining in a corrosive environment, machining aluminum, copper, metal forming, die cast molds)
AlCrN (Aluminum Chromium Nitride)	Blue-Gray	3000-3200	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1-5 μ DCT Tolerance: 2.5 μ +/- 20%	0.35	900	Superb hot hardness with extraordinary wear resistance under extreme mechanical stress (common use: machining such as gear cutting tools, inserts, some punching and die cast)

EDGE PREP™

- DCT offers unique ways to improve your parts performance using our Edge Prep™ tribology lab.
- The right pre-coat surface conditioning and post coat surface enhancement gives you major advantages!
- Cutting edges can be honed and modified using our proprietary systems. DCT can polish parts to mirror finishes.