

## IonBond CVD Coatings for Cutting Tools

IonBond Coating	Processes	Coating Structure	Applications	Standard thickness (microns)	Hardness (HV 0.05)	Oxidation Temp (°C / °F)	Coefficient of Friction vs Dry Steel	Color
<b>F / Bernex MachinemasterR</b>	MT-CVD	TiN / Ti(C,N) / TiN	Highly interrupted cutting, milling of alloy steels	4 to 6	2800	500 / 930	0.3	Gold
<b>HSM / Bernex MillmasterR</b>	MT-CVD	Al <sub>2</sub> O <sub>3</sub> variant κ	High speed milling and severely interrupted cutting of carbon, alloy and stainless steels and cast iron	4 to 6	2800-3000	No Oxidation	0.3	Gold
<b>HSK / Bernex TurnmasterR I</b>	MT-CVD	Al <sub>2</sub> O <sub>3</sub> variant κ	Turning of forgings, cast irons, carbon and alloy and stainless steels	8 to 10	2800-3000	No Oxidation	0.3	Gold
<b>Bernex TurnmasterR II</b>	MT-CVD	Al <sub>2</sub> O <sub>3</sub> variant α	Rough turning of forgings, cast irons, carbon and alloy and stainless steels	13 to 18	2800-3000	No Oxidation	0.2	Gold
<b>D / Bernex Turn</b>	MT-CVD	TiN / Ti(C,N) / TiN	Turning of carbon, alloy and stainless steels, as well as cast steels and iron in moderate conditions	13	2800	500 / 930	0.3	Gold
<b>HSA / Bernex SpeedCut</b>	CVD	Al <sub>2</sub> O <sub>3</sub> variant α	High speed cutting for roughing of bar stock, particularly abrasive and high temp operations, machining cast iron	13	3000	No Oxidation	0.2	Black
<b>U1</b>	CVD	TiC / Ti(C,N) / TiN	Universal coating for turning, grooving and moderately interrupted cutting	5 to 9	2600-2800	500 / 930	0.3	Gold
<b>U3</b>	CVD	TiN / TiC / TiN	Thin coating for milling super alloys and stainless steel	3	2600	500 / 930	0.3	Gold