

Kennametal Grade	Binder (%)	Grain Family	Hardness		Average TRS	
			HRA	HV30	PSI	Mpa
KR466	12	fine	90.0	1360	480000	3310
KR887	15	submicron	90.2	1380	435000	3000
CD650	15	submicron	90.2	1380	550000	3790
CD750	15.5	submicron	90.7	1440	625000	4310

Made-to-order blocks and preforms are available in an variety of grades for specialty applications

Grade	Grade description and application
KR466	<p>Composition: 12% corrosion-resistant binder with medium/fine grain structure. Very high strength for heavy impact with low wear properties.</p> <p>Application: For standard stamping — impacting punches, coining dies, forming dies, can die punches, swaging dies, cold forming, very severe draw dies for .075" thick cold-rolled steel, piercing punches (305 stainless steel), gummy steel.</p>
KR887	<p>Composition: 15% corrosion-resistant binder with submicron grain structure for lead frame and connector stamping. Very high strength and excellent wear resistance for medium-impact applications.</p> <p>Application: Stamping dies for razor blades, electronic stamping, lead frame dies, laminations, spring steel stampings, coining dies (hard metal). Not recommended for stamping thick stainless steel. Use in place of CD650 for difficult to EDM parts, or if corrosive die lubricants are used.</p>
CD650	<p>Composition: Conventional 15% cobalt binder with submicron grain structure for lead frame and connector stamping. Very high strength and excellent wear resistance for medium-impact applications. Our most popular grade for general purpose stamping.</p> <p>Application: Stamping dies for razor blades, electronic stamping, lead frame dies, laminations, spring steel stampings, coining dies (hard metal). Not recommended for stamping thick stainless steel.</p>
CD750	<p>Composition: Conventional 15.5% cobalt binder with ultrafine submicron grain structure for lead frame and connector stamping. Very high strength and excellent wear resistance for low-impact applications.</p> <p>Application: Extremely thin punches or tools with very fine features will benefit from the ultrafine submicron grain structure, which helps to prevent premature corner washout and maintain edge strength. Also may be used as an upgrade to CD650, due to increased hardness.</p>