CASTLEBAR CORPORATION

GRADE CHART

(330) 451-6511 • www.castlebar.us

CASTLEBAR Code	ISO Code	WC	CO	Grain Size	Hardness (HRa)	TRS (MPa)	Density (g/cm^3)
8805	K40-K50	88.0%	12.0%	Ultra-fine	92.5	4500	14.20
• Finishing and roughing of steels with hardness between 40 and 55 HRC, steels for surface treatments, nickel, and nickel alloys. Also suitable for manufacturing with micro end mills on steel applications.							
9105	K20-K30	91.5%	8.5%	Ultra-fine	93.8	4700	14.50
• Suitable for finishing manufacturing high speed steels with hardness between 55 and 65 HRC as HS and tempered steels. Suitable for high speed milling and drilling of cast iron, non-ferrous metals, light alloys, composites, laminates of paper, plastic, graphite.							
9008	K20	90.0%	10.0%	Sub-micron	92.0	3500	14.50
• Most versatile grade for steel manufacturing including non tempered steels with hardness up to 40 HR. Also suitable for aluminum alloys, aluminum magnesium, cast iron, non-ferrous materials.							
1008	K20	90.0%	10.0%	Sub-micron	92.1	3700	14.42
• Premium High Performance, impact and TRS intended for Aerospace & Defense applications requiring extended life and durability for steel manufacturing including non tempered steels with hardness up to 40 HR. Also suitable for aluminum alloys, aluminum magnesium, cast iron, non-ferrous materials.							
9208	K40-K50	88.0%	12.0%	Sub-micron	91.1	3740	14.22
• Stainless steel manufacturing, nickel alloys, titanium alloys, special alloys (nimonic, inconel, monel, hastelloy), brass, bronze, and roughing and drilling tender steels with irregular surfaces.							
9408	K10	94.0%	6.0%	Sub-micron	93.4	2600	14.80
• Number one choice for diamond coating. Also suitable for drilling and milling of plastic composites, PCB, ceramics, woods in particular hard woods and composite woods (MDF) and steels.							
9412	K20	94.0%	6.0%	Fine	92.0	2206	14.90
• Superior wear resistance. Burs, oil field applications, nozzles, seats, discs, etc.							
8924	K20	89.0%	11.0%	Medium	88.0	2413	14.30
• Exceptional toughness and fracture resistance. Blade inserts, flattening rolls.							

Avg Size	Classification
< 0.2	Nano
0.2 ≤ 0.5	Ultra-Fine
0.5 ≤ 0.8	Sub-Micron
0.8 ≤ 1.3	Fine
1.3 ≤ 2.5	Medium
2.5 ≤ 6.0	Coarse
> 6.0	Extra-Course