

Nominal Properties and Applications of Standard Grades

Grade	Percent Cobalt	Grain Size	Hardness, Rockwell A	Properties	Applications
HC-UF12	12.0	Ultra Fine	92.5	Excellent Wear Minimal Impact Excellent Edge Strength	Rotary Tools
HC-US06 HC-US10 HC-US15 HC-US16 HC-US20	6.0 10.0 14.0 16.0 10.0	Sub-Micron	93.3 92.4 90.9 90.8 92.4	Very Good Wear Light Impact Very Good Edge Strength Very Good Wear	Rotary Slitters, Cast Iron Punches and Dies, Rotary Tools High Temp Alloys Titanium, Inconels
HC-200 HC-290 HC292	3.0 6.0 6.0	Fine	92.8 92.0 92.2	Excellent Wear Light Impact Good Edge Strength	Rotary Seals and Slitters, Burnishing Rings, Crush Rolls, High Pressure Anvils, Valves Diamond Coating
HC-400 HC-410 HC-500 HC-600	9.0 11.5 13.0 15.0	Fine	91.5 90.5 90.1 89.3	Excellent Wear Medium Impact Good Edge Strength	Light to Medium Blanking, Punches and Dies, Slitters, Rolls
HC-291	6.0	Medium	91.5	Very Good Wear Medium Impact With stands Production Heat	Burr Blanks
HC-510M HC-510 HC-509 HC-M112	10.4 11.5 12.0 13.0	Medium	89.8 89.8 89.5 89.0	Good Wear Medium High Impact With stands Production Heat	Grippers, Swaging Dies, Heavy Blanking, Punches
HC-M105 HC-M155	10.0 15.5	Coarse	88.5 87.1	Good Wear High Impact With stands Production Heat	Rotary Drilling Compacts, Studs, Gauge Cutters, Extrusion Dies
HC-700 HC-800	20.0 25.0	Coarse	85.8 84.1	Good Wear Extreme Impact With stands Production Heat	Mill Rolls, Drilling Components