Elizabeth
CARBIDE COMPONENTS

TUNGSTEN CARBIDE GRADE CHART

INDUSTRY CODE	**BASIC CARBIDE**	APPROXIMATE BINDER %	HARDNESS ROCKWELL "A"	"C"	TRANSVERSE RUPTURE PSI	COMPRESSIVE STRENGTH PSI	GRAIN SIZE	BASIC APPLICATIONS
C-3 C-4	BC-3	3	92,0-93,0	80-82	225,000	660,000	Fine	**Best Wear Resistant; No shock** Developed for compacting ceramics, grinding compounds
C-1 C-2 C-3	BC-6	6	91,0-92,0	79-81	275,000	700,000	Fine	**Excellent Wear; Slight shock** Developed for cutting and abrasion resistance
C-10	BC-9	9	90-0-91,0	77-79	350,000	600,000	Fine	**Excellent Wear; Slight to Medium shock** Developed for light drawing and light blanking
Special	BC-11	11	89,0-90,5	74-77	350,000	625,000	Fine	**Good Wear;Medium shock high edge strenght** developed for stamping and lamination dies and punches
Special	BC-12C	12	88,0-89,0	72-74	500,000	540,000	Fine and Coarse	**Good Wear; Heavy shock** Developed for heavy work conditions. Use for WEDM
C-11	BC-13	13	88,5-89,5	73-75	370,000	600,000	Fine	**Good Wear; Medium shock** Developed for medium work conditions
C-12	BC-14	14	88,0-89,0	72-74	385,000	575,000	Fine	**Good Wear; Medium to heavy shock** General purpose grade, developed for medium to heavy work conditions
C-13	BC-15	15	87,5-88,5	71-73	400,000	560,000	Fine	**Good Wear; High strength** Developed for heavy work conditions.
Special	BC-15C	15	87,0-88,0	70-71	425,000	520,000	Fine and Coarse	**Medium Wear; Heavy shock** Used in place of C-14 grades, outperformed 20-25% grades in many applications
C-14	BC-20C	20	84,0-85,0	65-67	450,000	530,000	Coarse	**High Impact; Heavy shock resistance** Developed for gold heading and swaging dies
C-17	NC-22C	22	81,5-83,0	60-62	350,000	480,000	Extra Coarse	**Highest impact** Developed for heavy workload

SUBMICRON GRADES

Special	BC-6S	6	92,3-93,3	81-82	320,000	725,000	Sub Micron	**Excellent Wear; Light shock** Developed for cutting better wear than C-2 Grades
Special	BC-10S	10	90,7-92,0	78-80	400,000	630,000	Sub Micron	**Excellent Wear; Medium shock** Developed for slitting and cutting where some shock is involved
Special	BC-14S	14	89,0-90,5	74-77	450,000	675,000	Sub Micron	**Excellent Wear; Slight to Medium to heavy shock** Developed specially
Special	BC-17S	17	88,0-89,0	72-74	440,000	650,000	Sub Micron	**Good Wear;** High edge strength

NICKEL GRADES nonmagnetic available on request

C-18	BC-6N	6	90,5-92,0	78-80	275,000	690,000	Fine	**Excellent Wear** Use in corrosive environments-seals
Special	BC-10N	10	89,0-91,0	74-79	300,000	525,000	Extra Fine	**Excellent Wear** Specials seals, corrosive environments
Special	BC-12CN	12	87,5-89,0	71-74	320,000	400,000	Fine and Coarse	**Excellent Wear; Good shock** High strength, corrosive environments