

Sealing Technology

has been involved in research

of Material Science. While developing new types and grades of material to meet a variety of the market demands. Although powder metallurgy as a technique of manufacturing materials has been out for many years, we must continue to further our exploration to improve the quality and to engineer new products for cemented carbide products.

Carbide grades and property: WC-Co

Grade	Co (Wt%)	Density (g/cm ³)	Hardness (HRA)	TRS (≥N/mm ²)
YG6	6	14.7 ~ 15.1	90.5	1800
YG8	8	14.5 ~ 14.9	90.0	1980
YG12	12	14.0 ~ 14.4	88.0	2400
YG15	15	13.9 ~ 14.2	87.5	2480
YG20	20	13.4 ~ 13.7	86.0	2650
YG25	25	12.9 13.2	84.5	2850

Carbide grades and property: WC-Ni

Grade	Ni (Wt%)	Density (g/cm ³)	Hardness (HRA)	TRS (≥N/mm ²)
QU1	5	14.8 ~ 15.0	91.0	1760
QU2	10	14.3 ~ 14.6	90.0	2040
QU3	15	13.9 ~ 14.2	87.0	2400
N100	6	14.5 ~ 14.9	90.0	1800
N200	8	14.4 ~ 14.8	89.0	2000

Carbide grades and property: Grades for cutting tools

Grade	ISO	Density (g/cm ³)	Hardness (HRA)	TRS (≥N/mm ²)
QK01	K01	14.8 ~ 15.1	93.0	1550
QK05	K05	14.6 ~ 15.0	92.5	1650
QK10	K10	14.6 ~ 15.0	92.0	1720
QK10U	K10	14.6 ~ 15.0	93.0	2000
QK20	K20 M20	14.5 ~ 14.9	91.0	1800
QK30	K30	14.3 ~ 14.6	90.5	1960
QK30U	K30	14.2 ~ 14.6	91.5	2500
YG6X	K10	14.6 ~ 15.0	91.5	1860
YG8X	K10	14.5 ~ 14.8	90.0	2000
YG6	K20	14.7 ~ 15.1	90.5	1900
YG8	K30	14.5 ~ 14.9	90.0	1980
QP10	P10	12.8 ~ 13.2	92.0	1600
QP20	P20 M20	12.2 ~ 12.6	91.5	1760
QP25	P25	12.4 ~ 12.8	91.0	1850
QP30	P30	12.7 ~ 13.1	90.5	1950
QP35	P35	12.5 ~ 12.9	91.0	2220
QP40	P40	10.8 ~ 11.2	89.0	2300
YT15	P10	11.0 ~ 11.7	92.0	1600
YT14	P20	11.2 ~ 12.0	91.5	1700
YT5	P30	12.5 ~ 13.2	90.5	2000

Grades for wear-resistance & impact-resistance

Grade	Co (Wt%)	Density (g/cm ³)	Hardness (HRA)	TRS (≥N/mm ²)
YG8C	8	14.5 ~ 14.9	88.5	2020
YG9C	9	14.3 ~ 14.7	88.0	2100
YG111C	11	14.0 ~ 14.4	86.5	2280
YG13C	13	13.9 ~ 14.3	86.5	2320
YG16C	16	13.8 ~ 14.1	83.5	2400
YG20C	20	13.4 13.6	83.0	2460

New materials for cutters - TiC/TiN inserts