

# Grade of Carbide Wear Parts

## Sub-micron & Ultra fine WC Grade

Grade	WC Size (micron)	Composition (wt%)		Physical Properties			
		Co	WC+Cr <sub>3</sub> C <sub>2</sub> +VC	Density	HV <sub>30</sub>	K <sub>1</sub> C	TRS (N/mm <sup>2</sup> )
UF1	0.8	6	94	14.91	93.1	250	2500
UF12	0.5	12	88	14.10	1840	13.5	3622
UF10	0.8	10	90	14.44	1650	14.7	4049

TRS value after hipping & sinter hipping

## Wear-Resistance Grade

Grade	WC Size (micron)	Composition (wt%)		Physical Properties			
		Co	WC+Cr <sub>3</sub> C <sub>2</sub> +VC	Density	HRa	TRS (N/mm <sup>2</sup> )	Compressive strenght (kgmm <sup>2</sup> )
K10	1	6	94	14.91	92.5	2334	650
K20	1	6	94	15.0	92.0	2754	620
K30	1	9	91	14.7	90.6	2926	600
K40	2.4	11	89	14.43	89.5	3300	500
K45	2.4	13	87	14.20	88.9	3710	460

TRS value after hipping & sinter hipping

## Grade for Wear & Impact

Grade	WC Size (micron)	Composition (wt%)		Physical Properties			
		Co	WC+Cr <sub>3</sub> C <sub>2</sub> +VC	Density	HRa	TRS (kg/mm <sup>2</sup> )	Compressive strenght (kgmm <sup>2</sup> )
D20	1	12	88	14.3	90.0	350	430
Dx3	1	14	86	14.1	89.0	370	480
Dx5	2	16	84	13.9	87.5	390	440
D65	6	22	78	13.1	83.0	420	400

TRS value after hipping & sinter hipping