

MITSUBISHI CARBIDE GRADE FOR WEAR RESISTANT TOOLS

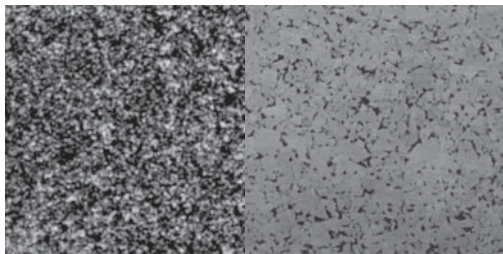
Table of MITSUBISHI CARBIDE Grade

(Representative values)

Classification	Grade	Binder wt%	Specific Gravity	Hardness HRA	Thermal Conductivity W/m·°C	Thermal Expansion Coefficient ×10 ⁻⁶ /°C	Young's Module GPa	Poisson's Ratio	Compressive Strength GPa	Fracture Toughness MPa·m ^{1/2}	** Bending Strength (After HIP) GPa
Sub-Micro Grain Series	TF15	10	14.5	91.0	71	5.3	580	0.22	5.8	12.5*	3.8
	MF10	8	14.6	92.8	72	4.9	600	0.22	6.5	10.5*	3.8
	MF20S	12	14.2	92.0	67	5.5	560	0.23	6.2	11.0*	3.9
	GM30	16	13.8	90.0	63	6.0	520	0.24	5.7	13.0*	3.9
GC Series	GC15	8	14.7	90.5	96	5.1	600	0.23	5.0	11	3.4
	GC20	12	14.4	89.5	90	5.4	570	0.24	4.6	14	3.4
	GC30	17	13.8	88.0	80	6.0	520	0.25	3.8	18	3.4
GTi Series	GTi05	6	14.9	92.0	95	4.8	630	0.22	5.9	6.8	3.2
	GTi10	5.7	14.9	91.0	101	4.8	630	0.22	5.5	9.3	3.2
	GTi15	8	14.7	90.0	97	5.0	600	0.23	4.9	12	3.3
	GTi20	11	14.4	89.0	91	5.3	570	0.24	4.7	15	3.3
	GTi30	16	14.0	87.0	82	5.9	520	0.25	4.0	21	3.3
	GTi35	17.5	13.8	86.5	79	6.0	510	0.25	3.8	22	3.3
	GTi40	20	13.5	86.0	75	6.3	490	0.26	3.5	23	3.3
	GTi50	24	13.2	84.0	84.0	70	6.7	460	0.27	3.0	25

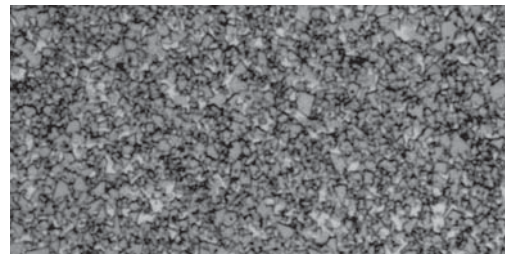
*According to IF method
**According to CIS 026

Sub-Micro Grain Series



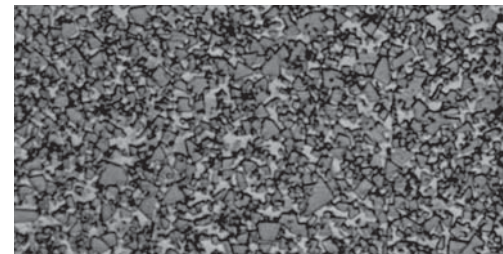
This sub-micro-grain series is produced by our own unique technology. Utilizing its excellent wear resistance due to high hardness and high compressive strength, the series is widely used for Slitting Knives and other special wear-resistant applications.

GC Series



Superior in fatigue resistance and corrosion resistance as well as in shock resistance and wear resistance.

GTi Series



Used for general wear-resistant applications. This series can maintain high hardness, but high modulus of elasticity and high compressive strength even at high temperatures. The series offers various wear-resistant tools and machine parts.