

GRADE COMPARISON TABLE

CEMENTED CARBIDE

Classification	ISO	Mitsubishi Materials	Kennametal	Sandvik	Seco Tools	Iscar	Sumitomo Electric	Tungaloy	Kyocera	Walter	Ingersoll	
	Symbol											
Turning	P	P01										
		P10				IC70	ST10P	TX10S			P10	
		P20	UTi20T		SMA		IC70 IC50M	ST20E	UX30			P20
		P30	UTi20T		SM30		IC50M IC54	A30	UX30	PW30		P30
		P40					IC54	ST40E				P40
	M	M10		KU10 K313 K68	H10A	890	IC07	EH510 U10E				M10
		M20	UTi20T	KU10 K313 K68	H13A	HX	IC07 IC08 IC20	EH520 U2	UX30			M20
		M30	UTi20T		H10F SM30	883	IC08 IC20 IC28	A30	UX30			
		M40					IC28					M40
	K	K01	HTi05T	KU10 K313 K68				H1 H2	TH03 KS05F			UF1
		K10	HTi10	KU10 K313 K68	H10 HM	890	IC20	EH10 EH510	TH10	KW10 GW15		K10
		K20	UTi20T	KU10 K313 K68	H13A	HX	IC20	G10E EH20 EH520	KS15F KS20	GW25		K20
		K30	UTi20T			883		G10E				K30
	N	N01			H10 H13A			H1 H2	KS05F	KW10		
		N10	HTi10	KU10 K313 K68		H15	IC08 IC20	EH10 EH510	TH10	KW10 GW15	WK1	
		N20		KU10 K313 K68		HX	IC08 IC20	G10E EH20 EH520	KS15F			
		N30				H25						
	S	S01	RT9005							SW05		
		S10	RT9005 RT9010 MT9015	K10 K313 K68	H10 H10A H10F H13A	HX	IC07 IC08	EH10 EH510	KS05F TH10	SW10	WS10 WK1	
		S20	RT9010 TF15	K10 K313 K68		H25	IC07 IC08	EH20 EH520	KS15F KS20	SW25		
S30		TF15										
Milling	P	P10										
		P20	UTi20T	K125M			IC50M IC28	A30N	UX30		IN40P	
		P30	UTi20T	GX			IC50M IC28	A30N	UX30	PW30	IN40P	
		P40					IC28			PW30		
	M	M10										
		M20	UTi20T				IC08 IC20	A30N	UX30			IM30M
		M30	UTi20T		SM30		IC08 IC28	A30N	UX30			IM30M
		M40					IC28					IM30M
	K	K01	HTi05T	K115M,K313								
		K10	HTi10	K115M K313			IC20	G10E	TH10	KW10 GW25	WK10	IN05S
		K20	UTi20T		H13A	HX	IC20	G10E	KS20	GW25	WMG40	IN05S IN30M IN10K IN15K
		K30	UTi20T								WMG40	IN10K IN15K IN30M

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MICRO GRAIN

Classification	ISO	Mitsubishi	Kennametal	Sandvik	Seco	Sumitomo	Tungaloy	Kyocera	Walter	Ingersoll
	Symbol	Materials			Tools	Electric				
Cutting Tools	Z	Z01	SF10 MF07 MF10		PN90 6UF,H3F 8UF,H6F		F0	F MD05F MD1508		IN05S
		Z10	HTi10 MF20		H10F	890	XF1 F1 AFU	MD10 MD0508 MD07F	FW30	IN05S
		Z20	TF15 MF30		H15F	890 883	AF0 SF2 AF1			IN05S
		Z30				883	A1 CC			

CERMET

Classification	ISO	Mitsubishi	Kennametal	Sandvik	Seco	Iscar	Sumitomo	Tungaloy	Kyocera	Walter	Ingersoll			
	Symbol	Materials			Tools		Electric							
Turning	P	P01	AP25N* VP25N*				IC20N IC520N*	T110A T1000A	NS520 AT520* GT520* GT720*	TN30 TN610 PV710* PV30* TN6010 PV7010*		CT3000 PV3010* PV3030* IN0560*		
		P10	NX2525 AP25N* VP25N*	KT315 KT125	CT5015 GC1525*	TP1020 TP1030* CM CMP*	IC20N IC520N* IC530N*	T1200A T2000Z* T1500A T1500Z*	NS520 NS730 GT730* NS9530 GT9530*	TN60 TN610 PV710* PV60* TN6010 PV7010*	WCE10	CT3000 PV3010* PV3030* IN60C		
		P20	NX2525 AP25N* VP25N* NX3035 MP3025*	KT325 KT1120 KT5020*	GC1525*	TP1020 TP1030*	IC20N IC520N* IC30N IC530N* IC75T	T1200A T2500A T2000Z* T3000Z* T1500A T1500Z*	NS530 NS730 GT730* NS9530 GT9530*	TN60 PV60* TN620 GT720* TN6020 PV7020* PV7025*		WCE10		
		P30	MP3025* VP45N*				IC75T	T3000Z*			PV7025* PV90*			
	M	M10	NX2525 AP25N* VP25N*	KT125	GC1525*	TP1020 TP1030* CM CMP*		T110A T1000A T2000Z* T1500Z*	NS520 AT530* GT530* GT720*	TN60 PV60* TN620 PV720* TN6020 PV7020*			IN0560*	
		M20	NX2525 AP25N* VP25N*					T1200A T2000Z* T1500A T1500Z*	NS530 GT730* NS730	TN90 TN6020 TN620 PV720* PV90* PV7020* PV7025*				
		M30												
	K	K01	NX2525 AP25N*					T110A T1000A T2000Z* T1500Z*	NS710 NS520 AT520* GT520* GT720*	TN30 PV30* PV7005* TN610 PV710* TN6010 PV7010*				
		K10	NX2525 AP25N*	KT325 KT125	CT5015			T1200A T2000Z* T1500A T1500Z*	NS520 GT730* NS730	TN60 PV60* TN6020 TN620 PV720* PV7020* PV7025*				
		K20	NX2525 AP25N*					T3000Z*						
	Milling	P	P10	NX2525			C15M	IC30N			TN60			
			P20	NX2525	KT530M HT7 KT605M	CT530	C15M MP1020	IC30N	T250A	NS530	TN100M TN60			
P30			MX3030 NX4545				IC30N	T250A T4500A	NS530 NS540 NS740			CT5000 IN2060*		
M		M10	NX2525					IC30N			TN60			
		M20	NX2525	KT530M HT7 KT605M	CT530	C15M	IC30N		NS530	TN100M				
		M30	MX3030 NX4545						T250A NS740					
		K	K01											
			K10	NX2525						NS530	TN60			
			K20	NX2525	KT530M HT7									

* Coated Cermet

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GRADE COMPARISON TABLE

CVD COATED GRADE

Classification	ISO	Mitsubishi Materials	Kennametal	Sandvik	Seco Tools	Iscar	Sumitomo Electric	Tungaloy	Kyocera	Walter	Ingersoll		
	Symbol												
Turning	P	P01	UE6105	KCP05B KCP05 KC9105	GC4305 GC4205 GC4005	TP0501 TP0500 TP1501 TP1500	IC9150 IC8150 IC428	AC810P AC700G	T9105 T9005	CA510 CA5505	WPP01	TT1500	
		P10	UE6105 MC6015 UE6110 MY5015	KCP10B KCP10 KCP25 KC9110	GC4315 GC4215 GC4015 GC4325	TP1501 TP1500 TP2501 TP2500	IC9150 IC9015 IC8150 IC8250	AC810P AC700G AC820P AC2000 AC8025P	T9105 T9005 T9115	CA510 CA5505 CA515 CA5515	WPP01 WPP05	TT1500	
		P20	MC6015 UE6110 MC6025 UE6020 MY5015	KCP25B KCP30B KCP25 KC9125	GC4315 GC4215 GC4015 GC4325 GC4225 GC4025	TP2501 TP2500	IC9015 IC8250 IC9250 IC9250 IC8350	AC820P AC2000 AC8025P AC830P	T9115 T9125	CA515 CA5515 CA525 CA5525 CR9025	WPP10S WPP20S	TT3500	
		P30	MC6025 UE6020 MC6035 UE6035 UH6400	KCP30B KCP40B KCP30 KCP40 KC8050	GC4325 GC4225 GC4025 GC4235 GC4035	TP3500 TP3000	IC8350 IC9250 IC9350	AC830P AC630M	T9125 T9135 T9035	CA525 CA5525 CA530 CA5535 CR9025	WPP30S	TT5100 KT450	
		P40	MC6035 UE6035 UH6400	KCP30 KCP40 KC9140 KC9040 KC9240 KC9245	GC4235 GC4035	TP3500 TP3000	IC9350	AC630M	T9135 T9035	CA530 CA5535		KT450	
	M	M10	MC7015 US7020	KCM15B KCM15	GC2015	TM2000	IC9250 IC6015 IC8250	AC610M	T6120 T9115	CA6515	WAM20		
		M20	MC7015 US7020 MC7025	KCM15 KC9225 KCM25B	GC2015	TM2000	IC9250 IC6015 IC9025 IC656	AC610M AC6030M AC630M	T6120 T6020 T9125	CA6515 CA6525		TT5100	
		M30	MC7025 US735	KCM25 KC9230 KCM35B	GC2025	TM4000	IC9350 IC6025 IC635	AC6030M AC630M	T6030	CA6525			
		M40	US735	KCM35B KCM35 KC9240 KC9245	GC2025	TM4000	IC6025 IC9350	AC6030M AC630M					
	K	K01	MC5005 UC5105	KCK05B KCK05	GC3205 GC3210	TK0501 TH1500 TK1001 TK1000	IC5005 IC9007	AC405K AC410K	T515 T5105	CA4505 CA4010 CA310	WAK10		
		K10	MC5015 UC5115 MY5015	KCK15B KCK15 KCK20 KC9315 KCK20B	GC3205 GC3210 GC3215	TK1001 TK1000 TK2000 TK2001	IC5005 IC5010 IC9150 IC428 IC4028	AC405K AC410K AC415K AC420K AC700G	T515 T5115	CA315 CA4515 CA4010 CA4115	WAK20	TT1300 TT1500	
		K20	MC5015 UC5115 UE6110 MY5015	KCK20 KC9110 KC9325	GC3215	TK2001 TK2000	IC5010 IC8150 IC9150 IC9015 IC418	AC415K AC420K AC700G AC820P	T5115 T5125	CA320 CA4515 CA4115 CA4120	WAK30		
		K30	UE6110	KC9125 KC9325			IC9015 IC418	AC820P	T5125				
	S	S01	US905		S05F					CA6515 CA6525 CA6535			
	Milling	P	P10				MP1500	IC9080 IC4100 IC9015				WKP25	IN6515
			P20	F7030		GC4220	MP1500 MP2500	IC5500 IC5100 IC520M	ACP100	T3130		WKP35	IN6530
			P30	F7030	KCPK30 KC930M	GC4230	MP2500	IC5500 IC4050	ACP100	T3130			
			P40		KC935M KC530M	GC4240							
		M	M10					IC9250					
			M20	F7030	KC925M			MP2500 MM4500	IC520M IC9350	ACP100 ACM200	T3130	CA6535	
M30			F7030	KC930M	GC2040		MP2500 MM4500	IC9350 IC4050	ACP100	T3130	CA6535		
M40				KC930M KC935M				IC635					
K		K01											
		K10	MC5020						ACK100	T1215 T1115 T1015	CA420M	WAK15	
		K20	MC5020	KC915M	GC3220 GC3330 K20W	MK1500 MK2000	IC5100 IC9150	ACK200	T1115 T1015		WKP25	IN6515	
		K30		KC920M KC925M KCPK30 KC930M KC935M	GC3330 GC3040	MK2000 MK3000	IC4100 IC4050 IC520M				WKP35	IN6530	

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PVD COATED GRADE

Classification	ISO	Mitsubishi	Kennametal	Sandvik	Seco	Iscar	Sumitomo	Tungaloy	Kyocera	Walter	Ingersoll	
	Symbol	Materials			Tools		Electric					
Turning	P	P01							PR1005			
		P10	VP10MF MS6015	KCU10 KC5010 KC5510 KU10T	GC1125	CP200 TS2000	IC250 IC507 IC570 IC807 IC907 IC908		AH710 SH725	PR1005 PR930 PR1025 PR1115 PR1225 PR1425		
		P20	VP10RT VP20RT VP15TF VP20MF MS6015	KCU10 KC5025 KC5525 KU25T	GC1125 GC15	TS2500	IC250 IC308 IC507 IC807 IC808 IC907 IC908 IC1008 IC1028 IC3028	AC520U	AH710 AH725 AH120 SH730 GH730 GH130 SH725	PR930 PR1025 PR1115 PR1225 PR1425 PR1535		
		P30	VP10RT VP20RT VP15TF VP20MF	KCU25 KC5525 KU25T	GC1125	CP500	IC228 IC250 IC328 IC330 IC354 IC528 IC1008 IC1028 IC3028	AC1030U AC530U	AH725 AH120 SH730 GH730 GH130 AH740 J740 SH725	PR1025 PR1225 PR1425 PR1535		TT7220
		P40				CP500 CP600	IC228 IC328 IC528 IC928 IC1008 IC1028 IC3028		AH740 J740	PR1535		TT8020
	M	M01										
		M10	VP10MF MS6015	KCU10 KC5010 KC5510	GC1115 GC15 GC1105	CP200 TS2000	IC354 IC507 IC520 IC807 IC907 IC5080T		AH710 SH725	PR1025 PR1225 PR1425	WSM20	
		M20	VP10RT VP20RT VP15TF VP20MF	KCU10 KC5010 KC5510	GC1115 GC15 GC1125	TS2500 CP500	IC354 IC808 IC908 IC1008 IC1028 IC3028 IC5080T	AC520U	AH710 AH725 AH120 SH730 GH730 GH130 GH330 AH630 SH725	PR1025 PR1125 PR1225 PR1425 PR915 PR930 PR1535	WSM30	TT5030
		M30	VP10RT VP20RT VP15TF VP20MF MP7035	KCU25 KC5525	GC1125 GC2035	CP500 CP600	IC228 IC250 IC328 IC330 IC1008 IC1028 IC9080T	AC520U AC530U AC1030U AC6040M	GH330 AH725 AH120 SH730 GH730 GH130 J740 AH645 SH725	PR1125 PR1425 PR1535		TT8020
		M40	MP7035		GC2035		IC328 IC928 IC1008 IC1028 IC3028 IC9080T	AC530U AC6040M	J740	PR1535		
	K	K01										
		K10		KCU10 KC5010 KC5510	GC15	CP200 TS2000	IC350 IC910 IC1008	AC510U	GH110 AH110 AH710			
		K20	VP10RT VP20RT VP15TF	KCU15 KCU25		CP200 TS2000 TS2500	IC228 IC350 IC808 IC830 IC908 IC1007 IC1008		GH110 AH110 AH710 AH725 AH120 GH730 GH130			
		K30	VP10RT VP20RT VP15TF	KCU25 KC5525		CP500	IC228 IC350 IC808 IC830 IC908 IC928 IC1007 IC1008		AH725 AH120 GH730 GH130			
	S	S01	MP9005 VP05RT			TH1000	IC507 IC804 IC807 IC907 IC5080T		AH905 AH8005	PR1305	WSM10	
		S10	MP9005 MP9015 VP10RT	KCU10 KC5010 KC5410 KC5510	GC1105 GC15	CP200 CP250 TS2000 TS2050 TS2500 TH1000	IC507 IC807 IC903 IC5080T	AC510U	AH905 SH730 AH110 AH8005 AH120	PR1310	WSM20	
		S20	MP9015 MT9015 VP20RT	KCU10 KCU25 KC5025 KC5525	GC1125	TS2500 CP500	IC228 IC300 IC328 IC808 IC908 IC928 IC3028 IC806 IC9080T	AC510U AC520U	AH120 AH725 AH8015	PR1125 PR1325	WSM30	
		S30	VP15TF	KC5525	GC1125	CP600	IC928 IC830	AC1030U	AH725	PR1125 PR1535		TT8020
	Milling	P	P01				IC903					
			P10		KC505M KC715M KC510M KC515M	GC1010		IC250 IC350 IC808 IC810 IC900 IC903 IC908 IC910 IC950	ACP200	PR830 PR1225		
P20			MP6120 VP15TF	KC522M KC525M KC527M KC610M KC620M KC635M KC715M KC720M KC730M KTPK20	GC1010 GC1030 GC1130 GC2030	F25M MP3000	IC250 IC300 IC328 IC330 IC350 IC808 IC810 IC830 IC900 IC908 IC910 IC928 IC950 IC1008	ACP200	AH725 AH120 GH330 AH330	PR830 PR1225 PR1230 PR1525		IN2004

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GRADE COMPARISON TABLE

PVD COATED GRADE

Classification	ISO	Mitsubishi Materials	Kennametal	Sandvik	Seco Tools	Iscar	Sumitomo Electric	Tungaloy	Kyocera	Walter	Ingersoll		
	Symbol												
Milling	P	P30	MP6120 VP15TF MP6130 VP30RT	KC735M KC725M KC530M KC537M KCPM40	GC1010 GC1030 GC2030 GC1130	F25M MP3000 F30M	IC250 IC300 IC328 IC330 IC350 IC830 IC845 IC900 IC928 IC950 IC1008	ACP200 ACP300	AH725 AH120 AH130 AH140 GH130 AH730 AH3035	PR1230 PR1525	WSP45	IN1040 IN1540 IN2040	
		P40	VP30RT	KC735M KC537M KCPM40	GC2030 GC1030 GC1130	F40M T60M	IC300 IC328 IC330 IC830 IC928 IC1008	ACP300	AH140 AH3035	PR1525			
	M	M01					IC907						
		M10		KC715M KC515M	GC1025 GC1030 GC1010		IC903	ACM100		PR1225	WSM35		
		M20	VP15TF MP7130 MP7030 VP20RT	KC610M KC635M KC730M KC720M KC522M KC525M KCPM40 KTPK20	GC1025 GC1030 GC1040 GC2030 S30T	F25M MP3000	IC250 IC300 IC808 IC830 IC900 IC908 IC928 IC1008	ACP200	AH725 AH120 GH330 AH330 GH110	PR1025 PR1225	WSP45		
		M30	VP15TF MP7130 MP7030 VP20RT MP7140 VP30RT	KC537M KC725M KC735M KCPM40 KC530M	S30T GC1040 GC2030	F30M F40M MP3000	IC250 IC300 IC328 IC330 IC830 IC928 IC1008 IC380	ACP200 ACP300 ACM300	AH120 AH725 AH130 AH140 GH130 AH730 GH340 AH3135	PR830 PR1225 PR1525 PR1535	WXM35	IN1515 IN1530 IN2005 IN2505	
		M40	MP7140 VP30RT			F40M	IC250 IC300 IC328 IC330 IC1008	ACP300 ACM300	AH140 AH3135 AH4035	PR1525 PR1535			
	K	K01	MP8010						AH110 GH110 AH330				
		K10	MP8010	KC514M KC515M KC527M KC635M	GC1010	MK2050	IC350 IC810 IC830 IC900 IC910 IC928 IC950 IC380 IC1008		AH110 GH110 AH725 AH120 GH130 AH330	PR1210 PR1510			
		K20	VP15TF VP20RT	KTPK20 KC514M KC610M KC520M KC620M KC524M	GC1010 GC1020	MK2000 MK2050	IC350 IC808 IC810 IC830 IC900 IC908 IC910 IC928 IC950 IC1008	ACK300	GH130	PR1210 PR1510		IN1030 IN2010 IN2015	
		K30	VP15TF VP20RT	KC522M KC725M KC524M KC735M KC537M	GC1020	MK2050	IC350 IC808 IC830 IC908 IC928 IC950 IC1008	ACK300				IN1510 IN2030	
	S	S01					IC907 IC908 IC808 IC903			PR1210			
		S10	MP9120 VP15TF	KC510M	GC1130 GC1010 GC1030 GC2030	MS2050	IC903 IC907 IC908 IC840 IC910 IC808	EH520Z EH20Z ACM100		PR1210			
		S20	MP9120 VP15TF MP9130 MP9030	KC522M KC525M KCSM30 KCPM40	S30T GC2030 GC1030	MS2050	IC300 IC908 IC808 IC900 IC830 IC928 IC328 IC330 IC840 IC380	EH520Z EH20Z ACK300 ACP300		PR1535	WXM35 WSM35		
		S30		KC725M KCPM40	GC2030 GC1040	MS2050 F40M	IC830 IC928	ACP300 ACM300	AH3135	PR1535			
	H	H01	MP8010 VP05HT				IC903				WXH15		
H10		VP15TF VP10H	KC505M KC510M	GC1130 GC1010 GC1030	MH1000 F15M	IC900 IC808 IC907 IC905							
H20		VP15TF		GC1030 GC1130	F15M	IC900 IC808 IC908 IC380 IC1008		AH3135					
H30					MP3000 F30M	IC380 IC900 IC1008		AH3135					

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CBN

	Classification	ISO	Mitsubishi Materials	Sandvik	Seco Tools	Sumitomo Electric	Tungaloy	Kyocera	Dijet
		Symbol							
Turning	H	H01	BC8105 BC8110 MBC010 MB810		CBN060K	BNC100 BNX10 BN1000	BXM10 BX310	KBN050M KBN10M KBN510	
		H10	BC8110 MBC020 BC8120 BC8020 MB825 MB8025	CB7015	CBN010	BNC160 BNX20 BN2000	BXM20 BX330	KBN25M KBN525	JBN300
		H20	MBC020 BC8120 BC8020 MB8025	CB7025 CB20	CBN150 CBN160C	BNC200 BNX25 BN250	BXM20 BX360	KBN30M	JBN245
		H30	BC8130 MB835	CB7525	CBN150 CBN160C	BNC300 BN350	BXC50 BX380	KBN35M	
	S	S01	MB730		CBN170	BN700 BN7000	BX950		
		S10							
		S20							
		S30							
	K	K01	MB710 MB5015			BN500 BNC500	BX930 BX910		
		K10	MB730 MB4020	CB7525		BN700 BN7500 BN7000	BX850	KBN60M	JBN795
		K20	MB730 MB4020		CBN200	BN700 BN7000	BX950	KBN60M	JBN500
		K30	BC5030 MBS140	CB7925	CBN300 CBN400C CBN500	BNS800	BX90S BXC90	KBN900	
		Sintered Alloy	MB4020 MB835		CBN200	BN7500 BN7000	BX450 BX470 BX480	KBN65B KBN570 KBN65M KBN70M	

PCD

	Classification	ISO	Mitsubishi Materials	Sandvik	Seco Tools	Sumitomo Electric	Tungaloy	Kyocera	Dijet
		Symbol							
Turning	N	N01	MD205	CD05	PCD05	DA90	DX180 DX160	KPD001	JDA30 JDA735
		N10	MD220	CD10	PCD10	DA150	DX140	KPD010	
		N20	MD220		PCD20	DA2200	DX120		JDA715
		N30	MD230		PCD30 PCD30M	DA1000	DX110	KPD230	JDA10

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