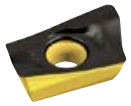
Cutting tool material application charts – Milling

Coated carbide

Walter grade designation	Standard designation	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Application range 01 05 10 15 20 25 30 35 40 45	Coating process	Coating composition	Example of indexable insert
WKP35G	HC – P 35	●●								ULP-CVD	TiAlN+TiN	
	HC – K 35			●●								
WKP35S	HC – P 35	●●								CVD	TiCN + Al_2O_3 (+ TiCN)	
	HC – K 35			●●								
WKP25S	HC – P 25	●●								CVD	TiCN + Al_2O_3 (+ TiCN)	
	HC – K 25			●●								
WAK15	HC – K 15			●●						CVD	TiCN + Al_2O_3 (+ TiN)	
WSP45G	HC – S 45					●●				PVD	TiAlN + Al_2O_3 + (ZrN)	
	HC – P 45	●●										
	HC – M 45		●●									
WSP45S	HC – S 45					●●				PVD	TiAlN + Al_2O_3 (Al)	
	HC – P 45	●●										
	HC – M 45		●●									
WMP45G	HC – S 45					●●				ULP-CVD	TiAlN + TiN	
	HC – M 45		●●									
WSM45X	HC – S 45					●●				CVD	TiCN + Al_2O_3 (+ TiCN)	
	HC – M 45		●●									
WSM35G	HC – S 35					●●				PVD	TiAlN + Al_2O_3 + (ZrN)	
	HC – M 35		●●									
WSM35S	HC – S 35					●●				PVD	TiAlN + Al_2O_3 (Al)	
	HC – M 35		●●									
WKK25G	HC – K 25			●●						PVD	TiAlN + Al_2O_3 + (ZrN)	
WKK25S	HC – K 25			●●						PVD	TiAlN + Al_2O_3 (Al)	

HC = Coated carbide

●● Primary application
● Additional application

Cutting tool material application charts – Milling

(continued)

Coated carbide

Walter grade designation	Standard designation	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Application range 01 05 10 15 20 25 30 35 40 45	Coating process	Coating composition	Example of indexable insert
WSP46	HC – S 45					●●				PVD	TiAlN + Al_2O_3	
	HC – P 45	●●										
	HC – M 45		●●									
WSP46G	HC – S 45					●●				PVD	AlTiN (+ ZrN)	
	HC – P 45	●●										
	HC – M 45		●●									
WSM36	HC – S 35					●●				PVD	TiAlN + Al_2O_3	
	HC – M 35		●●									
WHH15X	HC – H 15						●●			PVD	TiAlN-TiAlCrSiN	
	HC – P 15	●										
	HC – K 15			●								
WNN15	HC – N 15				●●					PVD	TiAlN	
WXN15	HC – N 15				●●					PVD	TiCN[plus]	
WXM15	HC – P 15	●●								PVD	Multilayer TiAlN/TiN	
	HC – M 15		●									
	HC – K 15			●								

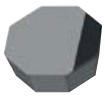
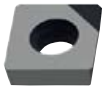
HC = Coated carbide

●● Primary application
● Additional application

Cutting tool material application charts – Milling

(continued)

Uncoated carbide, ceramic, CBN and PCD

Walter grade designation	Standard designation	Material groups: P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Application range: 01 05 10 15 20 25 30 35 40 45	Coating process	Coating composition	Example of indexable insert
WK10	HW – N 10				●●					—	—	
WMG40	HF – N 35				●●					—	—	
WCB80	BH – K 05			●●						—	—	
	BH – H 15						●					
WSN10	CN – K 20			●●						—	—	
WCD10	DP – N 10				●●					—	—	
WEP20	HT – P 20	●●								—	—	
	HT – K 20			●●						—	—	
	HT – M 20		●●							—	—	
WDN20	DP – N 20				●●					—	—	
WIS10	CN – S 10					●●				—	—	

BH = CBN with high CBN content
CN = Silicon nitride ceramic Si_3N_4
DP = Polycrystalline diamond
HF = Uncoated fine-grained carbide
HT = Uncoated cermet
HW = Uncoated carbide

●● Primary application
● Additional application