

ROTATING TOOL INSERTS

CERMET

- NX2525 for high speed milling.
- NX4545 for general milling.

SELECTION STANDARD

Milling

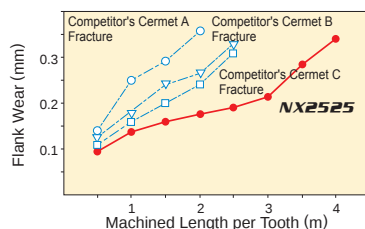
Work Material	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
P Steel	NX2525	250 (150 — 350)	P10 M10	NX2525 NX4545
	NX4545	150 (120 — 180)	P20 M20	
			P30 M30	
K Cast Iron	NX2525	200 (150 — 300)	K01	NX2525
			K10	
			K20	

(Note) For wet cutting of steel, please use coated carbide F7030. For wet cutting of cast iron, please use coated carbide MC5020.

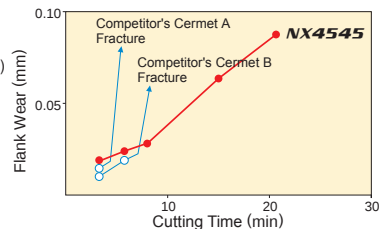
CUTTING PERFORMANCE

Cutting Performance

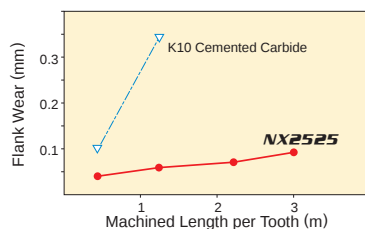
Cutting Speed : v_c Depth of Cut : a_p
Feed per Tooth : f_z Width of Cut : a_e



Steel High Speed Milling
<Cutting Conditions>
Workpiece : DIN 41CrMo4 (97W×400L)
Cutter : SE445R0506E
Insert : SEEN1203AFTN1
 $v_c=350\text{m/min}$
 $a_p=2.5\text{mm}$
 $f_z=0.2\text{mm/tooth}$
Dry Cutting



Steel Shoulder Milling
<Cutting Conditions>
Workpiece : DIN 41CrMo4 (220HB)
Cutter : NSE400R503S32
Insert : TEEN2204PETR1
 $v_c=200\text{m/min}$
 $f_z=0.35\text{mm/tooth}$
 $a_e=25\text{mm}$
 $a_p=3.0\text{mm}$
Down Cut Dry Cutting



Cast Iron Milling
<Cutting Conditions>
Workpiece : DIN GG30 (95W×400L)
Cutter : SE445R0506E
Insert : SEEN1203AFTN1
 $v_c=180\text{m/min}$
 $a_p=2.5\text{mm}$
 $f_z=0.2\text{mm/tooth}$
Dry Cutting

GRADE CHARACTERISTICS

Grade	Substrate			
	Hardness (HRA)	T.R.S. (GPa)	Thermal Conductivity (W/m·K) *	Thermal Expansion ($\times 10^{-6}/\text{K}$)
NX2525	92.2	2.0	33	7.8
NX4545	90.0	2.2	33	7.8

*1GPa=102kg/mm², 1W/m·K=2.39×10⁻³cal/cm·sec·°C