## Details by grade



### **NF15**

A generally used grade with equally good wear resistance and toughness.

Because of its toughness it is often the base material for making endmills used for cutting at low speed where chipping resistance is essential and is also a suitable material for small diameter tools used where breakage resistance is necessary.

It is a widely used work material that can be machined to a variety of configurations.

Grade	Class	Grain size [μm]	Code ISO	Hardness HRA	Transverse rupture strength [GPa]	Specific gravity	Chemical composition [wt%]		
Craac							WC	Со	Other
NF15	Fine	0.8	K20-K40	91.5	4.3	14.4	Bal.	10.0	_



#### TUZ20K

A fine grain alloy with reinforced toughness. As it is not susceptible to chipping, it is the recommended base material for thin cutting edges in end mills.

(	Grade	Class	Grain size [μm]	Code ISO	Hardness HRA	Transverse rupture strength [GPa]	Specific gravity	Chemical composition [wt%]		
	Crace							WC	Со	Other
	TUZ20K	Fine	0.6	K15-K40	91.2	3.9	14.1	Bal.	13.0	0.5



# Details by grade



## TK8

It is a medium grain alloy with excellent wear and heat resistance and designed to enable processing at high temperatures.

Grade	e Class	Grain size [μm]	Code ISO	Hardness HRA	Transverse rupture strength [GPa]	Specific gravity	Chemical composition [wt%]		
Grade	Ciass						WC	Со	Other
TK8	Medium- sized grain		K10	92.0	3.3	14.9	Bal.	5.5	1.0