

Tantalum / Niobium Carbide TaC/NbC

Application

Tantalum / niobium carbides are used as additives mainly for P-type cutting tools and cermets because of the beneficial effect on hot hardness and toughness. Therefore these products are homogeneous mixed crystals with high purity and narrow particle size distribution.

Chemical Characteristics

Elements	TaC 100	TaC/NbC 90/10	TaC/NbC 80/20	TaC/NbC 77/23
	%	%	%	%
C total	6.10 – 6.30	6.50 – 6.90	7.00 – 7.40	7.15 – 7.55
Nb	0.25 max	8.2 – 9.6	16.7 – 18.7	19.4 – 21.4
Ta	balance	83.2 – 85.2	73.8 – 75.8	71.0 – 73.0

	TaC/NbC 70/30	TaC/NbC 60/40	TaC/NbC 50/50	NbC 100
	%	%	%	%
C total	7.50 – 7.90	8.00 – 8.40	8.50 – 8.90	11.0 – 11.4
Nb	25.7 – 27.5	34.4 – 36.4	43.3 – 45.3	balance
Ta	64.8 – 66.6	55.1 – 57.1	45.8 – 47.8	0.25 max

All Grades

Elements	%	Elements	%
Al	0.005 max	O for "coarse"	0.20 max
C free	0.15 max	O for "standard"	0.25 max
Ca	0.005 max	O for "fine"	0.35 max
Fe	0.03 max		
N	0.05 max		
S	0.005 max		
Si	0.005 max		
Ti	0.05 max		

Physical Characteristics

Grade	FSSS
	µm
fine ¹	0.8 – 1.0
standard	1.0 – 2.0
coarse	2.0 – 3.0



Packing

- NbC 100 fine/standard: 50 kg in 40 l coated steel drums with rubber sealing
- All others: 50 kg in 25 l coated steel drums with rubber sealing
- Material in PE- Bag

Maximum Lot Size

- NbC 100 fine: 500 kg
- NbC 100 standard/coarse 1.000 kg
- All Others 2.000 kg

Inspection certificate according
DIN EN 10204 3.1

¹ NbC 100 fine FSSS 0.9 – 1.2 µm

