



DESCRIPTION

Kennametal manufactures tungsten carbide powders by controlled carburization of hydrogen-reduced tungsten powder. Our tungsten carbide powder is produced under stringent quality control and subjected to adequate testing. We produce large uniform batches of high purity WC powder with varying average particle sizes ranging from 0.5µm to 50.0µm for manufacturers of cemented tungsten carbide powder and parts.

APPLICATIONS

We manufacture tungsten carbide powder that is used make cemented tungsten carbide powder and thermal spray hardfacing powder. The mixture of tungsten carbide, cobalt and wax powders is pressed and sintered into various carbide shapes that are used as steel cutting inserts and wear components. Thermal spray powders are used in the automobile, aerospace, oil & gas industries, and beyond.

TYPICAL PHYSICAL PROPERTIES

Type	0	I	II	III	IV
FSSS Size, µm	0.6 – 0.99	1.00 – 1.69	1.70 – 4.99	5.00 – 9.99	10.00 – 50.0
Production Screened	-200	-200	-200	-200	-200
Carbon Total Wt% ¹	6.10 – 6.20	6.10 – 6.20	6.10 – 6.20	6.10 – 6.20	6.10 – 6.20
Carbon Combined Wt% ¹	≥6.07	≥6.07	≥6.07	≥6.07	≥6.07
Available Dopants ²	VC, Cr ₃ C ₂ , NbC	VC, Cr ₃ C ₂ , NbC	VC, Cr ₃ C ₂		
Al Wt.%	≤0.004	≤0.002	≤0.003	≤0.003	≤0.003
Cu Wt.%	≤0.003	≤0.002	≤0.003	≤0.003	≤0.003
Cr Wt.% ³	≤0.005	≤0.003	≤0.005	≤0.0015	≤0.002
Fe Wt.%	≤0.01	≤0.01	≤0.01	≤0.02	≤0.03
Ni Wt.%	≤0.005	≤0.005	≤0.005	≤0.01	≤0.02
Mo Wt.%	≤0.01	≤0.01	≤0.01	≤0.01	≤0.02
O ₂ Wt.%	≤0.28	≤0.15	≤0.18	≤0.01	≤0.08

Notes:

¹ Specified Carbon levels may be requested by customer – excludes Cr₃C₂ doped materials

² Dopant type and level may be specified by customer

³ Excludes Cr₃C₂ doped materials

Particle size distribution by Malvern per request

Scott Density reported for all materials.

Use test at 10% Cobalt addition available upon request



All powder is commercially uniform in purity. The chemical and physical analyses are determined for each production lot of powder by using commercially accepted methods.

The results of all relevant tests are reported to the customer on a Certificate of Analysis.

PACKAGING

All material is packed in polyethylene bags inside the following containers:

3.5 Gallon Pail (up to 50kg per container)

17 Gallon Metal Drum (up to 250kg per container)

CUSTOMER SERVICE CONTACT

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