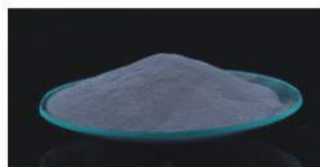


WC 粉

Tungsten carbide powder



粉末分厂能够生产粒度0.2—60 μm之间的任何一种碳化钨粉，产品具有纯度高，粒度分布集中、晶型完整、质量稳定等特性。

外观：碳化钨外观呈灰黑色或浅灰色粉末，颜色均匀一致。

用途：广泛应用于硬质合金生产，如切削刀具、矿山工具、耐磨零部件等。

Any tungsten carbide powder with a particle size between 0.2~60 μm can be produced. The products have a high purity, centralized particle size distribution, perfect crystal morphology and stable quality.

Appearance: dark grey or light grey. The color is uniform and unanimous.

Usage: the tungsten carbide powder is mainly using for manufacturing cemented carbide products including cutting tools, mining tools and wear parts, etc.

通用WC粉：该系列碳化钨粉产品质量稳定，能满足大多数硬质合金生产。

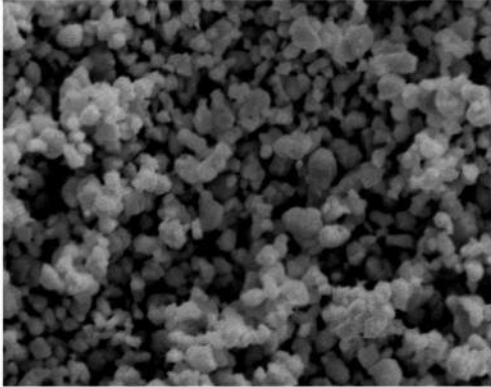
Common tungsten carbide powders: this series of tungsten powders has a stable quality and can meet the requirements of the cemented carbide production.

类别 Classification of the particle size	牌号规格代码 Grade	粒度, μm Particle size	Tc, %	Fc, %	Cc, %	O, %
细颗粒 Fine	FWC10	1.00-1.50	6.13 ± 0.05	≤0.06	≥6.08	≤0.12
	FWC15	1.50-2.00	6.13 ± 0.05	≤0.06	≥6.08	≤0.10
	FWC20	2.00-2.50	6.13 ± 0.05	≤0.05	≥6.08	≤0.08
中颗粒 Medium	FWC25	2.50-3.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.06
	FWC30	3.00-4.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.05
	FWC40	4.00-5.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.05
	FWC50	5.00-6.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.05
	FWC60	6.00-8.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.04
粗颗粒 Coarse	FWC80	8.00-10.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.03
	FWC100	10.00-15.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.03
特粗颗粒 Extra coarse	FWC150	15.00-20.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.03
	FWC200	20.00-25.00	6.13 ± 0.05	≤0.05	≥6.08	≤0.03

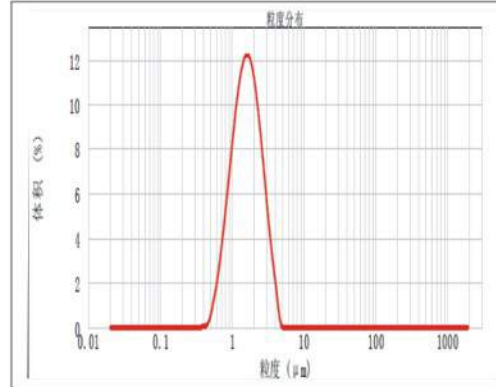
- 注明：1、此标准中的粒度为碳化钨粉供应态的F_{ss}粒度(μm)。
2、总碳含量、F_{ss}粒度的标准可根据用户需要进行调整。
3、当总碳含量超过上述标准的最高值时，游离碳含量会相应增加。

- Note :** 1、The particle sizes of the tungsten carbide powder in the table is a F_{ss} particle size(μm) as supplied.
2、The total carbon content and F_{ss} particle size can be adjusted upon the customer's requirements.
3、The free carbon content will be also increased when the total carbon content exceeded the above limit.

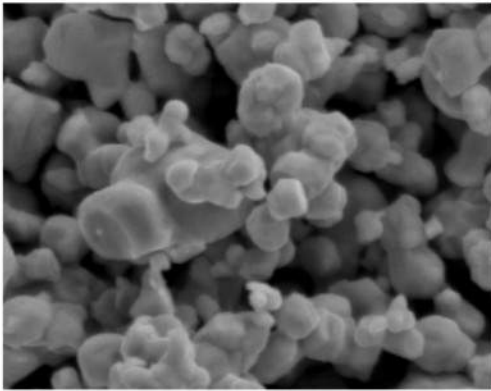
通用WC粉电镜形貌与粒度分布



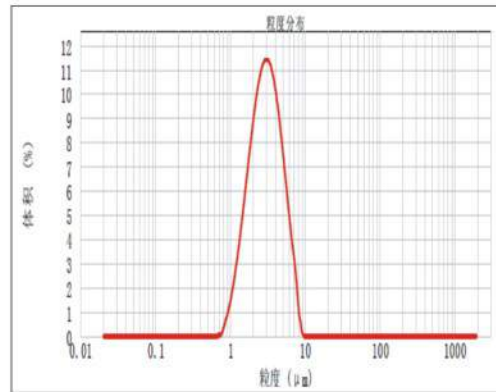
WC10电镜 5000×



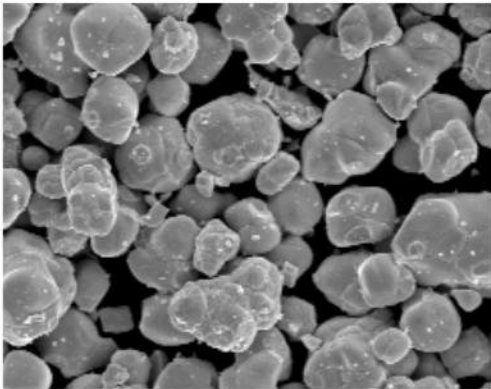
WC10激光粒度组成 (研磨态)
WC10 Particle size determined by laser(as milled)



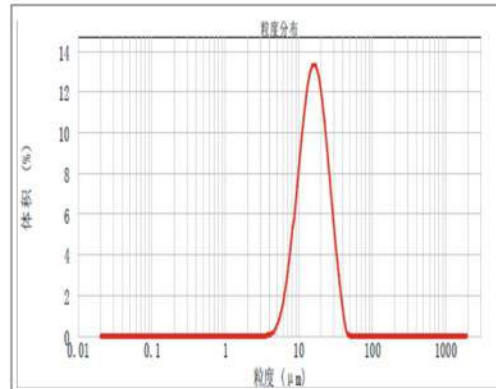
WC30电镜 3000×



WC30激光粒度组成 (研磨态)
WC30 Particle size determined by laser(as milled)



WC100电镜 500×

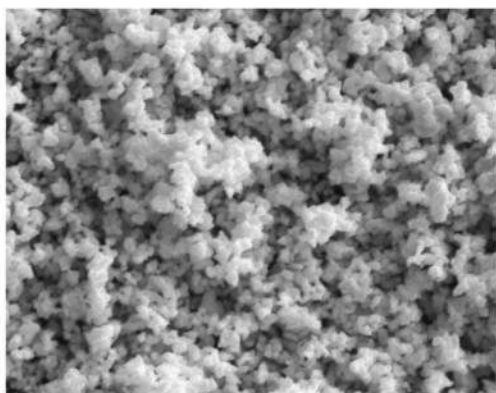


WC100激光粒度组成 (供应态)
WC100 Particle size determined by laser(as supplied)

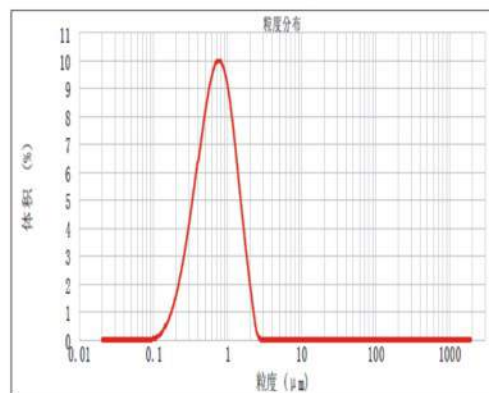
超细WC粉: 该系列碳化钨粉粒度分布集中、分散性好, 合金烧结温度敏感性低、氧含量低、产品质量稳定。

Superfine tungsten carbide powder: this series of tungsten carbide powder has a good centralized particle size distribution, good dispersity, low sensitivity to alloy sintering temperature, low oxygen content and stable quality of the products.

类别 Classification of the particle size	牌号规格代码 Grade	BET:m ² /g; 粒度: μm Particle size	Tc, %	Fc, %	Cc, %	O, %
超细颗粒 Super fine	FWC02	BET: ≥2.5	6.20 ± 0.05	≤0.15	≥6.08	≤0.5
	FWC04	BET: 1.9-2.5	6.20 ± 0.05	≤0.12	≥6.08	≤0.35
	FWC06	粒度 Particle size: 0.60-0.80	6.13 ± 0.05	≤0.10	≥6.08	≤0.25



WC04电镜 5000 ×



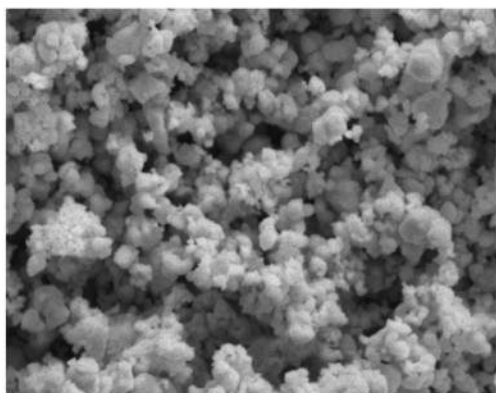
WC04激光粒度组成 (研磨态)
WC04 Particle size determined by laser(as milled)



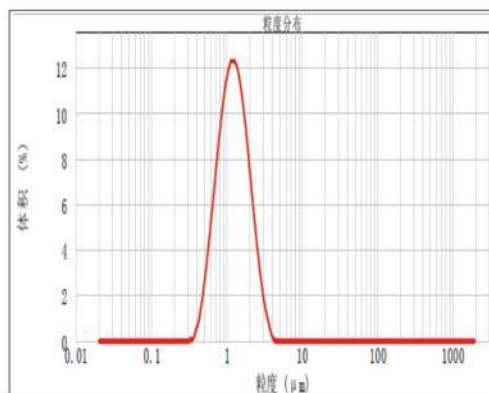
亚细WC粉: 该系列碳化钨粉粒度分布集中, 分散性好, 氧含量低、产品质量稳定。

Sub fine tungsten carbide: this series of tungsten carbide powder has centralized particle size distribution, good dispersion low oxygen content and stable quality.

类别 Classification of the particle size	牌号规格代码 Grade	粒度, μm Particle size	Tc, %	Fc, %	Cc, %	O, %
亚细颗粒 Sub fine	FWC08	0.80-1.00	6.13 ± 0.05	≤ 0.06	≥ 6.08	≤ 0.15



WC08电镜 5000×

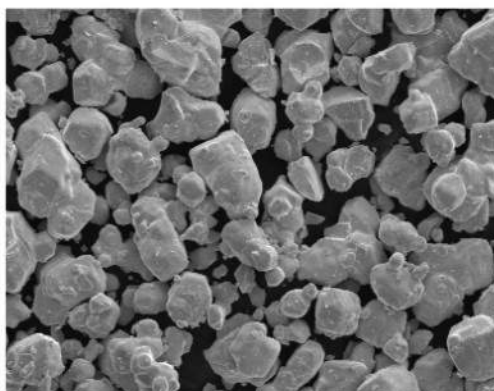


WC08激光粒度组成 (研磨态)
WC08 Particle size determined by laser(as milled)

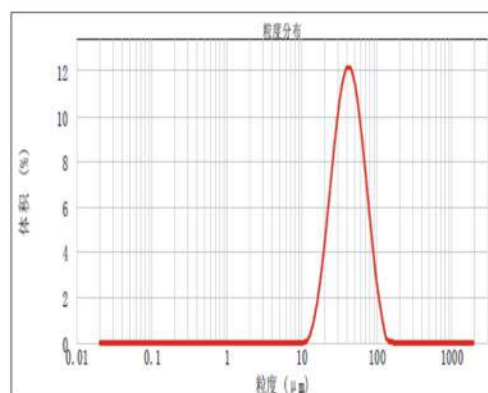
超粗WC粉： 该系列碳化钨晶粒发育完整、颗粒形貌一致性好。

Super coarse tungsten carbide: this series of tungsten carbide powder has a perfect grain structure and good unanimity of the particle morphology.

类别 Classification of the particle size	牌号规格代码 Grade	粒度, μm Particle size	Tc, %	Fc, %	Cc, %	O, %
超粗颗粒 Super coarse	FWC250	25.00-30.00	6.13 ± 0.05	≤ 0.05	≥ 6.08	≤ 0.03
	FWC300	30.00-40.00	6.13 ± 0.05	≤ 0.05	≥ 6.08	≤ 0.03
	FWC400	40.00-60.00	6.13 ± 0.05	≤ 0.05	≥ 6.08	≤ 0.03



WC300电镜 200×



WC300激光粒度组成 (供应态)
WC300 Particle size determined by laser(as supplied)

WC粉 化学成分

Tungsten carbide powder Chemical composition

杂质含量 Content of impurities, (%)	元素 Element	最大值 Max	典型值 Typical value
		Al	0.002
	As	0.0015	0.0005
	Bi	0.0003	0.0001
	Ca	0.002	0.0005
	Cd	0.0003	0.0001
	Co	0.01/0.02*	0.005/0.01*
	Cr	0.003/0.005*	0.002/0.003*
	Cu	0.0005	0.0001
	Fe	0.02	0.01
	K	0.0015	0.0007
	Mg	0.001	0.0005
	Mn	0.001	0.0005
	Mo	0.005	0.001
	Na	0.0015	0.0007
	Ni	0.006	0.003
	P	0.001	0.0007
	Pb	0.0003	0.0001
	Sb	0.001	0.0005
	Si	0.003	0.001
	Sn	0.0003	0.0001
	Ti	0.001	0.0005
	V	0.001	0.0005
	S	0.001	0.0005

注明: 1、WC含量采用100%—除气体以外的杂质含量。

2、带*号为F₈₅₀粒度5μm以上适用。

Note: 1、Tungsten carbide content is calculated using 100% minus all impurities contents with exception of gases.

2、F₈₅₀ particle size with a mark * is suitable only for the particle size larger than 5μm.