



QUALITY



SERVICE



VALUE



Viper Carbide & Metals Inc.

Office: 50 W. Big Beaver Rd. STE 120 Troy, MI 48084, USA

Warehouse: 43424 N Interstate 94 Service Dr. Belleville, MI 48111, USA

Office: +1 734 546 3127

Email: purchaser@vipercarbide.com

Website: www.vipercarbide.com

HongKong Office

Add: FLAT/RM A 12/F, ZJ 300, 300 LOCKHART ROAD, WAN CHAI, HONG KONG.

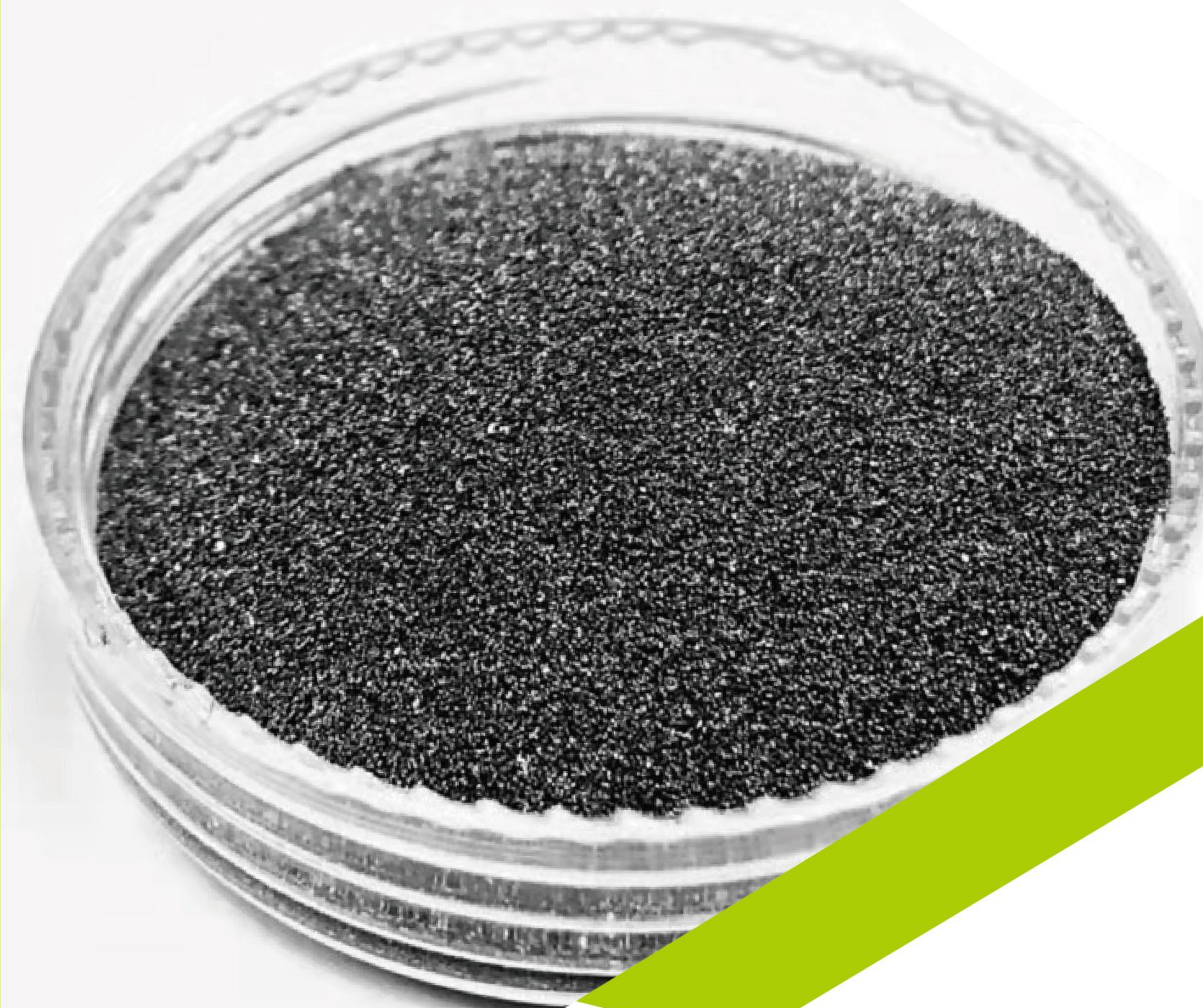
China Office

Add: 800 Changjiang South Road, Zhuzhou, Hunan

Tel: +1 734 834 3996 (Xiao)

+86 158 7332 9070 (Joanna)

Email: joanna.wu@vipercarbide.com



HARDFACING MATERIALS & HVOF

Viper Carbide & Metals Inc.



CATALOG

- 01 HARDFACING MATERIALS
CWC
- 02 SCWC
- 03 MWC
- 04 HVOF

ABOUT US



Viper Carbide & Metals, Inc. was founded on August 7, 2019, with the purpose of providing high-performance Carbide products to the North American market.

Based in Michigan, we are a company passionate in the carbide business and committed to always going beyond our customer's expectations when it comes to quality, packaging & delivery.

With a vast variety of carbide products, we hope to always have exactly what you are looking for with the material quality you expect.

Viper Carbide believes not only in high quality products, but the highest-quality customer service. With that said, we will always do our best to provide you with products that exceed your expectations and earn your trust. Our success is defined by Viper's dedication to customer service and the happiness of you, the customer.



CAST TUNGSTEN CARBIDE POWDER



Appearance	Dark gray powder
Particle size range	0.038mm~2.362mm
Application	Used for PDC bits, and hardfacing materials for cement and different fields

Grade & Chemical Composition

Grade	Chemical Composition (%)									
	W	T.C	F.C	Ti	Ni	Cr	V	Si	Fe	O
VP-A	95-96	3.8-4.1	≤0.08	≤0.1	/	≤0.1	≤0.05	≤0.02	≤0.3	≤0.05
VP-B	92-93	3.8-4.1	≤0.08	≤0.1	2.5-3.5	≤0.1	≤0.05	≤0.02	≤0.3	≤0.05
VP-C	91-92	3.8-4.1	≤0.08	≤0.1	3.5-4.5	≤0.1	≤0.05	≤0.02	≤0.3	≤0.05
VP-D	90-91	3.8-4.1	≤0.08	≤0.1	4.5-5.5	≤0.1	≤0.05	≤0.02	≤0.3	≤0.05

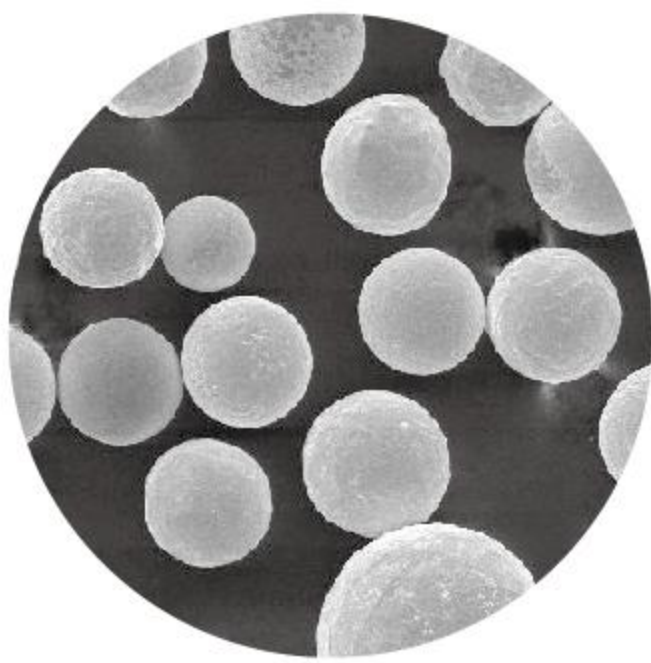
Type and Particle Size

Type	Sieve Size (mesh)	Particle Size (μm)
YZ8-12M	-8 ~ +12	2,362-1,397
YZ10-20M	-10 ~ +20	2,000-850
YZ20-30M	-20 ~ +30	850-600
YZ30-40M	-30 ~ +40	600-425
YZ40-60M	-40 ~ +60	425-250
YZ60-80M	-60 ~ +80	250-180
YZ80-200M	-80 ~ +200	180-75
YZ200-400M	-200 ~ +400	75-38
YZ400M	-400	38

Physical and Mechanical Properties

Hardness (HRA)	Microhardness (kg/mm²)	Density (g/cm³)	Melting Point (°C)
93.0-93.7	2,500-3,000	16.5	2,525

SPHERICAL CAST TUNGSTEN CARBIDE POWDER



Appearance	Regularly spherical dark gray powder
Particle size range	0.025mm-0.25mm
Application	Widely used for exploiting drill bits, PDC drill tools,melting and penetrating spray coating and piled-up welding on wear surface.

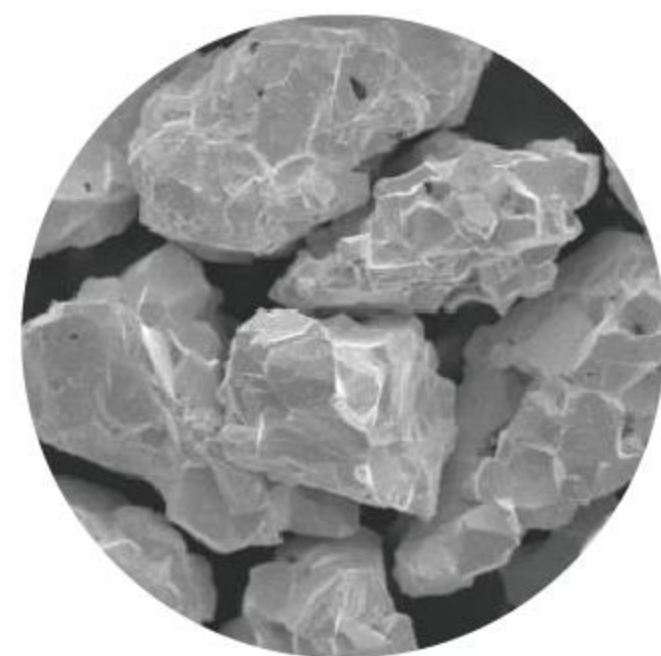
Grade & Chemical Composition

Grade	Chemical Composition (%)									
	W	T.C	F.C	Ti	Mo+Co+Ni	Cr	V	Si	Fe	O
VP-YZD	95-96	3.8-4.1	≤0.08	≤0.1	≤0.2	≤0.1	≤0.05	≤0.02	≤0.3	≤0.05

Common Specification, Particle Size & Physical Properties

Specification	Sieve (mesh)	Corresponisive Size Range (mm)	Physical Properties	
			Specific Density (g/cm³)	Microhardness (kg/mm²)
60-80	-60 ~ +80	-0.25~0.18	15.8 - 16.7	2,700 - 3,300
60-100	-60 ~ +100	-0.25~0.15		
100-200	-100 ~ +200	-0.15~0.075		
200-325	-200 ~ +325	-0.075~0.045		
100-325	-100 ~ +325	-0.15~0.045		
-325	-325	-0.045		

MACRO TUNGSTEN CARBIDE POWDER



Appearance	Light gray powder
Particle size range	0.038mm-0.85mm
Application	It's a new kind of cemented carbide material as substantial material for mining and geological prospect.

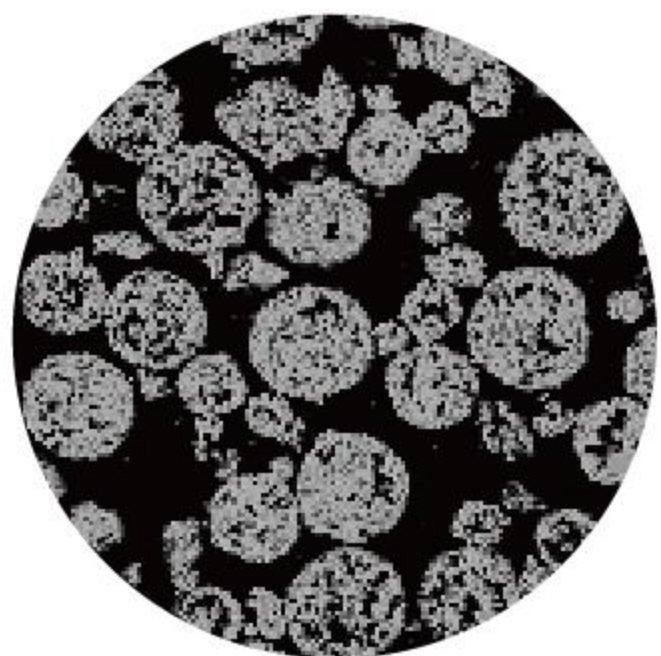
Grade & Chemical Composition

Grade	Chemical Composition (%)									
	W	T.C	F.C	Ni	Co	Ti	Ta	Nb	Si	Fe
VP-A	balance	6.1	≤0.06			≤0.15	≤0.03	≤0.03	≤0.02	≤0.25
VP-B	balance	6.1-6.2	≤0.06	2.5-3.5		≤0.15	≤0.03	≤0.03	≤0.02	≤0.25
VP-C	balance	6.1-6.2	≤0.06	3.5-4.5		≤0.15	≤0.03	≤0.03	≤0.02	≤0.25
VP-D	balance	6.1-6.2	≤0.06	4.5-5.5		≤0.15	≤0.03	≤0.03	≤0.02	≤0.25
VP-E	balance	6.1-6.2	≤0.06		2.5-3.5	≤0.15	≤0.03	≤0.03	≤0.02	≤0.25
VP-F	balance	6.1-6.2	≤0.06		3.5-4.5	≤0.15	≤0.03	≤0.03	≤0.02	≤0.25
VP-G	balance	6.1-6.2	≤0.06		4.5-5.5	≤0.15	≤0.03	≤0.03	≤0.02	≤0.25

Common Specification, Particle Size & Physical Properties

Specification	Sieve (mesh)	Corresponive Size Range (mm)	Physical Properties	
			Specific Density (g/cm³)	Microhardness (kg/mm²)
40-60	-40~+60	0.425-0.25	6.6-7.4	1,600 - 1,900
60-80	-60~+80	0.25-0.18	6.6-7.2	
80-200	-80~+200	0.18-0.075	6.4-7.0	
200-400	-200~+400	0.075-0.038	6.0-6.6	
-325	-325	<0.045	5.8-6.4	

HVOF



Appearance	Dark Gray or Metal-lustre Power
Character	Wear Resistance, Corrosion Resistance and High Temperature Properties.

Grade & Chemical Composition

Category	Grade	Chemical Composition (%)						Physical Index	
		C	Co	Ni	Cr	Fe	O	Grade	Grain Size (μm)
WC/Co	VP06Co	5.2-6.0	5.0-7.0	/	/	≤0.2	≤0.5	Spheical	-106/+45
	VP12Co	5.2-6.0	11.0-13.0	/	/	≤0.2	≤0.5		-53/+15
	VP17Co	4.5-5.5	16.0-18.0	/	/	≤0.2	≤0.5		-45/+15
WC/Cr/Co	VP10Co4Cr	4.5-5.5	9.0-11.0	/	3.0-4.5	≤0.2	≤0.5		
WC/Ni	VP10Ni	5.0-6.0	/	9.0-11.0	/	≤0.2	≤0.5		
WC/Cr/Ni	VP20Cr7Ni	5.0-6.5	/	5.0-8.0	17.5-22.5	≤0.3	/		