

# **Composite Rod**

#### CEMENTED CARBIDE TOOLS



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#### **Product Introduction**

Tungsten Carbide Composite Rod is made by sintering crushed particles of cemented carbide with Nikel-based alloy or Copper-based alloy. The sharp cemented carbide crushed particles have good wear resistance and cutting (grinding) ability.

As one of the hard surface materials, the cemented carbide composite rode is widely used. Mainly used for surfacing welding, petroleum, mining, coal mine, geology, construction and other industries with severe wear or cutting workpieces. Typically used in downhole tools such as boreholes, hole openers, waste disposal plants, milling tools, fishing tools, centralizers, etc.







The crushed particles of our company's tungsten carbide composite rod are all made of top hammer material, and the product composition is consistent to ensure stable product performance.

The particles screening method independently developed by our company ensures hat our crushed particles are multi angular and makes the product more wear-resistant. The use of high-quality solder ensures the fluidity of our rods, easy to weld, and helps customers improve production efficiency.

## **Chemical Composition**

Grade	Chemical Composition (Wt%)			
	Ni+Cu+Zn+Sn	Cu+Zn+Sn	WC	Со
Cu-30		30±2	63-65	5.2-6.0
Cu-40		40±2	53-56	4.6-4.8
Cu-45		45±2	48-52	4.2-4.5
Cu-50		50±2	44-48	3.8-4.2
Ni-Cu-30	30±2		63-65	5.2-6.0
Ni-Cu-40	40±2		53-56	4.6-4.8
Ni-Cu-45	45±2		48-52	4.2-4.5
Ni-Cu-50	50±2		44-48	3.8-4.2

### Specification

	Metric (mm)	Inch		
Grain Size	0.4-1.6	1/64"-1/16"		
	1.6-3.2	1/16"-1/8"		
	3.2-4.8	1/8"-3/16"		
	4.8-6.4	3/16" -1/4"		
	6.4-8.0	1/4"-5/16"		
	8.0-9.5	5/16"-3/8"		
	Specia	Special Shape		
Length	Weight	Width		
280mm	250g-290g	10-12mm		
450mm	450g-480g	14-16mm		

Hardness 87-90 HRA

Customize Particle Contents is Welcome



## **Welding Point**

### **Density**

### Hardness

- 900-1050 °C
- (1000-1100°C for with Nickel)
- 12.5-13.0 g/cm<sup>3</sup>
- 87-90 HRA















