



Tungsten Carbide 12% Cobalt (WC-12Co)

Product Features

WC-12Co is known for its exceptional hardness and resistance against abrasion, erosion, impact and sliding wear. The cobalt matrix provides increased toughness and fracture resistance, effectively binding the hard tungsten carbide particles together to inhibit crack propagation. This composition results in durable coatings with high density, low porosity, and strong bond strength, making it ideal for high-stress, non-corrosive environments up to about 500 °C (930 °F). "F" products have submicron carbides.



Typical Uses and Applications

For wear parts in the oil and gas industry (valves, pumps), aerospace components (turbine blades), manufacturing tools (extrusion dies), and mining and drilling equipment.

Chemical Composition

	W	Co	Total C	O	Fe
P-WC012	Bal.	11.0-13.0	5.2-5.7	≤0.1	≤0.5
P-WC012-F	Bal.	11.0-13.0	5.2-5.7	≤0.1	≤0.5

Physical Characteristics

	Manufacturing method	Nominal particle size (µm)	Typical flow rate (s/50g)	Typical apparent density (g/cm ³)
P-WC012	Agglomerated & sintered	-45/+15, -105/+45	12.4	4.4-5.2
P-WC012-F	Agglomerated & sintered	-45/+15, -105/+45	11.3	4.8-5.4

Other size on request

Address: Powderloop Technology Ltd
40 Warner Drive
Springwood Industrial Estate
Braintree CM7 2YW
United Kingdom

Telephone: +44 7477 552959
Email: sales@powderloop.com
Website: www.powderloop.com
Registration no.: GB 13891248
VAT no.: GB 444774273000