Material Product Data Sheet

Tungsten Carbide Chrome Carbide Nickel (WC-20CrC-7Ni)

POWDERLOOP

Product Features

WC-20CrC-7Ni powder features WC for exceptional hardness and wear resistance, and Cr_3C_2 for superior resistance to oxidation and corrosion, especially at elevated temperatures up to 750°C (1290 °F). The Ni matrix provides a combination of toughness, ductility, and good chemical resistance in various environments, including some acids and alkalis. This composition creates dense coatings with fine microstructures and excellent bond strength, making them ideal for applications demanding high resistance to both corrosive and erosive wear.

Typical Uses and Applications

For the oil and gas industry (valves, pumps), steel production (furnace rolls), chemical processing (ball valves), paper mill, and in environments with high-temperature erosion or cavitation damage.

Chemical Composition

	W	Cr	Ni	Total C	O	Fe
P-WC207	Bal.	16.5-19.0	6.0-8.0	6.4-7.2	≤0.1	≤0.5

Physical Characteristics

	Manufacturing method	Nominal particle size (µm)	Typical flow rate (s/50g)	Typical apparent density (g/cm^3)
P-WC207	Agglomerated & sintered	-45/+15, -105/+45	16.5-30	3.7-4.3

Other size on request

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