

Product Technical Information

Sprayable Superfine Cobalt-Chromium /Tungsten Carbide Infralloy™ S7406 Thermal Spray Powder

[U.S. Patent Nos. 6,277,774 ; 6,287,714; 6,576,036;
7,238,219; 7,537,636; 7,625,542]

Thermal Spray Grade

Nickel-chromium/tungsten carbide is a metal-ceramic- (cermet) composite material used as a high temperature wear and corrosion resistant coating. The alloyed form gives superior hardness. Infralloy™ powder is made from tungsten carbide nanoparticles (0.1-1 μm) with a cobalt-chromium binding matrix phase.

Infralloy™ Series S7406 powder is available as agglomerated particles with dimension $15 < \Phi < 45 \mu\text{m}$ with high flowability for HVOF thermal spray applications.

Infralloy™ S7427 Powder

Co	6
Cr	21
C	5.0
W	Remaining
Other alloy additives	<1%
Particle size (μm)	0.1-0.5
Agglomerate size (μm)	-45 to +15
Hardness (VHN)	1000

1 micron = 10^{-6} meter

1 nanometer = 10^{-9} meter

Suggested Applications

Inframat® Infralloy™ S7406 cobalt-chromium/tungsten carbide powder is a superior coating material providing high temperature wear-, erosion-, and corrosion-resistant surfaces where excellent to exceptional fracture toughness is required, especially for temperatures above 400°C. It is an excellent candidate for hard chrome replacement coatings:

- Compared to WC/Co coatings, it has much improved higher temperature oxidation & corrosion resistance properties
- Good chemical corrosion resistance
- Application temperature: 1200°F (650°C)
- Possible application for Al-Zn sink rollers

The Thermal Spray Grade material can be applied with DC Arc plasma and HVOF guns.

Contact Information

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