

Product Technical Information

Sprayable Superfine Tungsten Carbide Cobalt – Infralloy™ Thermal Spray Powder S7417

[U.S. Patent Nos. 6,277,774 6,576,036]
7,238,219

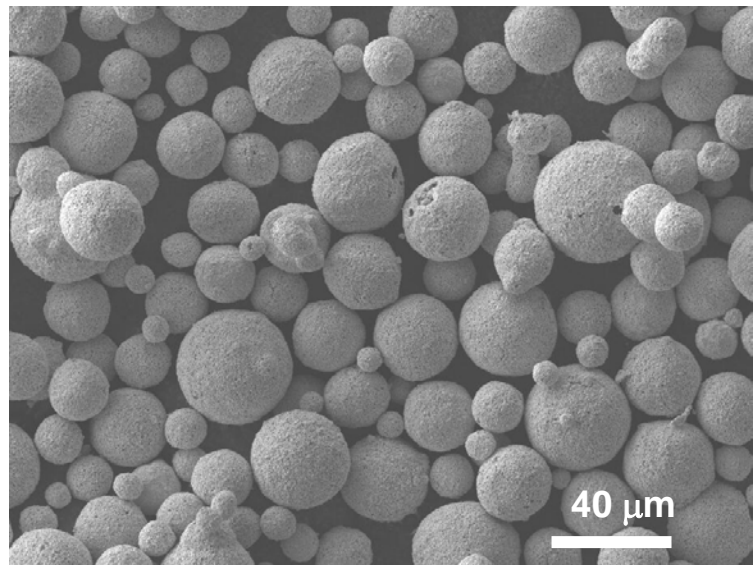
Thermal Spray Grade

Tungsten carbide cobalt is a ceramic-metal (cermet) composite material used as a wear resistant coating. The alloyed form gives superior hardness. Infralloy™ powder is made from WC nanoparticles alloyed with a cobalt binding matrix phase.

Infralloy™ S7417 powder is available as agglomerated particles with dimension $5 < \Phi < 45 \mu\text{m}$ with high flowability for HVOF thermal spray applications.

Morphology

SEM micrograph typical of Infralloy™ S7417 feedstock powder showing spherical geometry with high flowability.



Infralloy™ S7417 Properties

WC: Co wt ratio	83: 17
Alloy content	< 1 %
Particle size μm	0.1 - 0.5
Agglomerated size (μm)	-45 to +5
Coating hardness (VHN)	950 -1200

1 micron (μm) = 10^{-6} meter (m)

Note: other particle sizes: e.g., -45 to +5 microns, or =15 to -38 microns, are also available through customer special ordering depending on requests.

Suggested Applications

Inframat® Infralloy™ S7417 Series powder is a superior coating material providing wear-, erosion-, and corrosion-resistant surfaces where excellent to exceptional fracture toughness is required.

The Thermal Spray Grade material can be applied with DC Arc plasma and HVOF guns. Full spray specifications are available through Technical Applications Bulletins Nos. S7417.10B.

Contact Information

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