

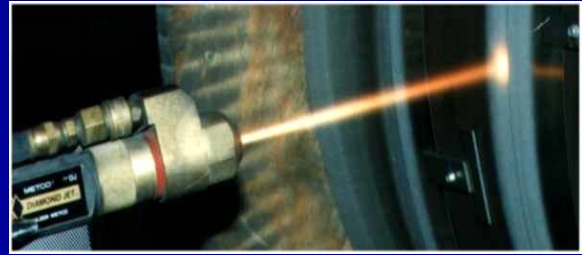


POWDERMET INC.

"The Cutting Edge in Metal Powder Technology"

24112 Rockwell Drive
Euclid, OH 44117
Phone: 216.404.0053
www.powdermetinc.com

PComP™ Thermal Spray Powders

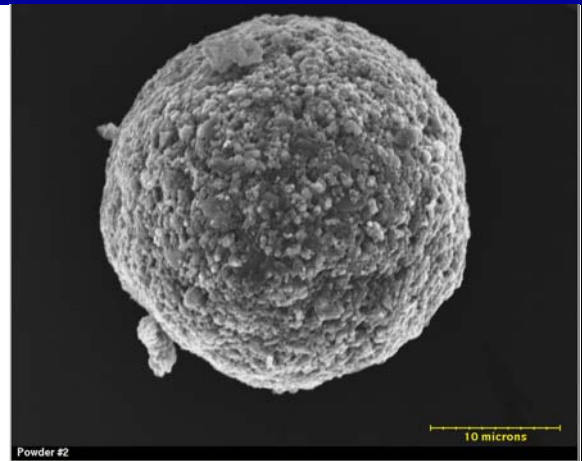


PComP™ is a family of metal-ceramic composite particles specifically engineered for thermal spray applications. PComP™ composites provide an optimum blend of the high wear and hardness associated with nanocrystalline ceramic materials with the ductility and toughness of metal binders. PComP's Particulate COMposite Powder structure combines nanoscale ceramics and metals in a patent-pending, "duplex" structure combining a nanocomposite core encapsulated with a metal coating.

Powdermet is a world-class developer and manufacturer of micro- and nano-composite materials for aerospace, defense, and industrial applications. Process technologies include reactive milling, spray drying, and fluidized bed coating to produce particles engineered at the nanometer and micrometer scales. Whether it is a 10 lb trial lot or a 2,000 lb production lot, Powdermet can fill your engineered powder needs.

MicroComposite Powders

- ☛ Optimum metal and ceramic blends
- ☛ Spray dried and sintered
- ☛ Spherical, free-flowing
- ☛ Micro/Nanocrystalline grain size
- ☛ Low density cermets
- ☛ High Deposition Efficiency
- ☛ Improved machinability
- ☛ High toughness coatings



Paper mill components, valve seals, pump shafts, forming rolls, bearing surfaces, hardrock equipment, compressor seals, power turbines, and other applications where hardness, wear resistance and corrosion resistance are needed.

PComP™ Product Descriptions

Product	D10 (microns)	D50	D90	Density (g/cc)	Hardness	
					Ra	Vickers
PComP™ TiN (Ni-TiN)	15	32	53	4.7	68-72	840
PComP™ WC17r WC-17Co	10	25	40	15.4	88-90	1500



Powdermet's 54,000 sq ft Materials Manufacturing and R&D Center

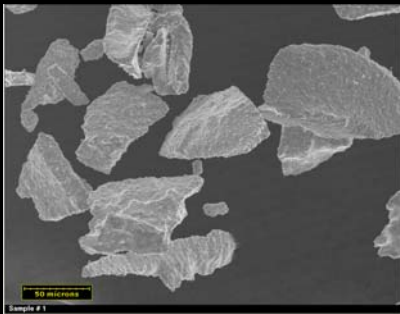
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For more information on how PComP™ Composite thermal spray powders can solve your coating challenges, please contact a Powdermet Engineer.

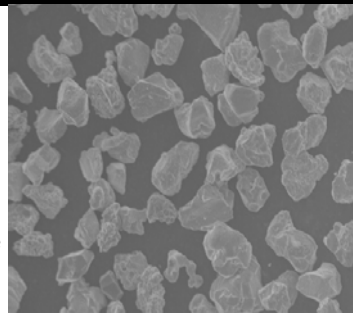


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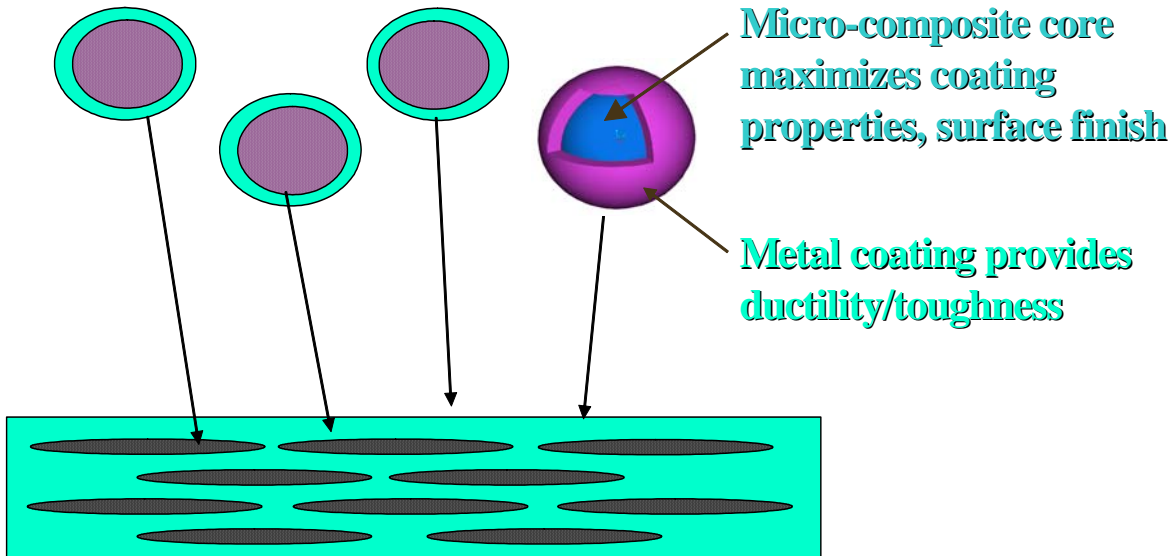


At Left:
 Photomicrograph showing structure of **PComp™ WC-17Co®**, a cobalt-encapsulated recycled carbide material



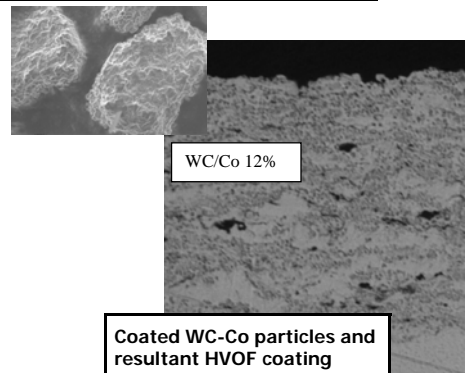
At Right:
 Photomicrograph showing structure of Ni-encapsulated TiN particles.

The PComp™ Advantage



PComp™ coating bent 360 degrees, showing absence of cracking or spallation

PComp™ WC-Co materials currently are optimized for plasma and HVOF applications, and are free-flowing composite powders with Hall flows between 12 and 42 seconds. Typical DE's exceed 65%, and there are no components to separate. Additional **PComp™** compositions are currently in the development stage, and Powdermet continues to improve coating yields, performance, and cost-effectiveness



Coated WC-Co particles and resultant HVOF coating

Custom Manufacturing of Engineered Powders

Powdermet specializes in custom materials, and can provide both development and production lots to your specifications. We stock standard WC-17Co Pcomp™ duplex powders for your convenience.