

Agglomerated and Sintered Tungsten Carbide, Cobalt Powder

TeroJet[®] 55 583

HVOF Powder



COATING

- High bond strength on a wide variety of base metals
- Very good abrasion resistance
- May be used on some non-hvof application systems
- Hard, dense coatings with excellent resistance to fretting wear
- Excellent surface finish after grinding



DESCRIPTION:

TeroJet 55 583 is an agglomerated and sintered Tungsten Carbide-Cobalt powder designed specifically for application via thermal spraying. Optimum coating results will be achieved using HVOF. However, 55 583 powder may also be applied using high energy, low velocity combustion or plasma NTA systems.

Each lot of powder is subjected to extensive quality checks to insure a consistent particle size distribution and chemical composition. The powder is essentially spherical in shape. The HVOF coatings produced are hard, dense and will exhibit high bond strengths to a wide variety of base metals. Exceptional resistances to low stress abrasion, fretting wear and erosion can also be expected.

TECHNICAL DATA:

COATING PROPERTIES:

Typical Micro Hardness: 1000-1200 DPH 100g
Hardness / R15N: 90-92 (HRC 59-65 converted)
Typical Bond Strength: >10,000 psi (ASTM C633)
Porosity: < 2 %
Coating Density: 12.8 g/cc
Service Temperature: 1020° F / 549° C (Max)
As-Sprayed Roughness: 175 micro-inches AA
As-Ground Roughness: < 10 micro-inches AA
As-Ground and Lapped: < 5 micro-inches AA
Wear Resistance: 10-12 x 10⁻³ mm³ Volume Loss
(ASTM G65, Sch. A)

POWDER PROPERTIES:

Chemistry/Matrix: Tungsten Carbide
Cobalt
Bulk Density: 4.0-4.4 g/cc

PROCEDURES FOR USE

FINISHING PROCEDURE:

Coatings of 55 583 may be finished by grinding using diamond wheels or belts with flood coolant. Follow the tool manufacturer's recommendations for speeds and feeds.

TYPICAL APPLICATIONS:

- Compressor Shafts
- Oil Field Apparatus
- Pump Seals
- Hydraulic Cylinders
- Induced Draft Fan Blades
- Compressor Rods

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