

File: 1.9.2.2CH-1343VM
Issue: N11019
Original Issue

COATING PROPERTIES

1343VM TUNGSTEN CARBIDE - 17% COBALT COATINGS

Spray Conditions:

Excellent coatings of TAFE 1343VM can be obtained at spray rates from 2 to over 20 lb/hr with the JP-5000. For typical starting conditions see bulletin 1.9.2.2SH-1343VM.

	<u>10 lb/hr (4.5 kg/hr)</u>	<u>20 lb/hr (9.07 kg/hr)</u>
Coverage	61.6 ft ² /hr/0.001" (0.145 m ² /hr/mm)	109.5 ft ² /hr/0.001" (0.258 m ² /hr/mm)
Powder Required	0.163 lb/ft ² x 0.001" (31.7 kg/m ² x mm)	0.184 lb/ft ² x 0.001" (35.7 kg/m ² x mm)

Finishing Procedures:

Use good quality, precision grinding equipment with coolant.

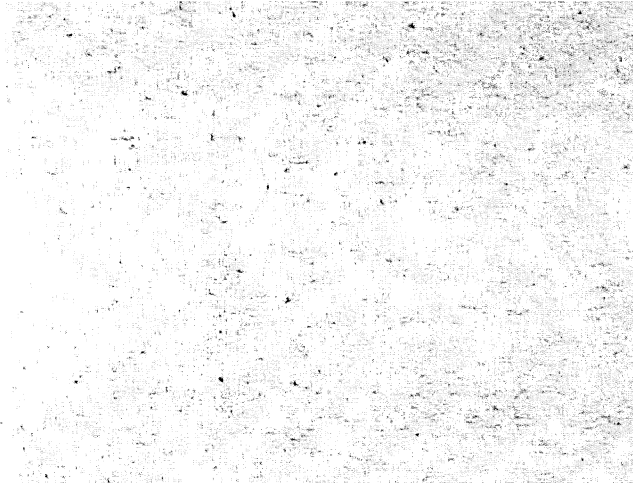
Typical setup:

Diamond Wheel 150 grit	Rough	
Diamond Wheel	400 grit	Finish
Wheel Speed:	5500 sfpm	
Infeed:	0.0005" per pass	
Feedrate:	400 sfpm (cylindrical)	

Coatings:

Thickness (maximum)*		0.250" (6.5mm)
Finish -	As Sprayed Ground	150 μ -in AA Less than 10 μ -in AA
Bond Strength		10,000 psi (Epoxy failure at 0.015" Thickness)
Hardness -	Superficial Macro Micro	91 R _{15N} 64 R _C 1200 DPH ₃₀₀
Microstructure -	Porosity Oxides	Less than 1% Less than 3%

* Coating thicknesses over 0.100" (4mm) can be achieved with special parameters (consult factory).



Tafa 1343VM WC-17Co Coating Magnification: 200 X
As Sprayed at 15 lb/hr Etchant: None (As Polished)

The information provided herein is believed to be accurate and reliable; however, results may vary with part preparation and operator technique. Tafa warrants only that the powders are free of defects in material and workmanship. No other warranty is expressed or implied.

Hazards:

Observe normal spraying practices. Respiratory and hearing protection is advised. For general guidelines see AWS Publication C2.1-73, and AWS TSS-85. Thermal spraying is a safe process when performed in accordance with proper safety measures.

For further information on HVOF coatings, equipment and supplies, as well as other thermal spray processes and custom automated systems, contact:

Tafa Incorporated
 146 Pembroke Road, Concord, NH 03301
 Phone (603) 224-9585
 Fax (603) 225-4342