



APTICOTE 800-17

Pure Molybdenum Powder

POETON
EST. 1898

Apticote 800-17 is a pure molybdenum powder that produces a dense coating with a strong bond and is applied using atmospheric plasma spray.

Molybdenum coatings provide very good frictional and anti-scurf properties via an oxide surface layer that forms rapidly after spraying. The resulting coating is hard and lubricious in nature, therefore offers excellent dry-running properties making it an ideal choice in applications to resist fretting and sliding wear.

Apticote 800-17 can be used for in service temperature applications up to 340°C, however above this the molybdenum will oxidise rapidly.

The coating can be applied to a variety of substrates. It is self bonding to steel and with the correct pre-treatment, to eliminate substrate surface oxides, applied to magnesium and aluminium alloys. It cannot however be applied to copper or copper alloys.

TYPICAL APPLICATIONS

- Valve & pump components
- Pins & connectors
- Lathe bedways
- Piston rings
- Continuous casting moulds
- Furnance components
- Gears

KEY FACTS

Classification	Pure metal, molybdenum-based
Chemical Formula	Mo 99.0%+
Morphology	Spheroidal or irregular
Purpose	Wear & scuff resistance
Process	Atmospheric plasma spray
Recommended Finishing Process	Wet Grind using SiC Wheel

TECHNICAL INFORMATION

Deposit Efficiency	70 - 80%
Porosity	<4 vol. %
Macrohardness	69 - 74 HR15N
Microhardness	420 - 455 HV0.3
Service Temperature	340°C
Melting Point	2620°C
Apparent Density	5.8 - 5.9 g/cm ³



CENTRE OF EXCELLENCE

Apticote 800-17 is applied at the Poeton Thermal Spray Centre of Excellence in Gloucester.

This state-of-the-art facility features modern spraying equipment, run by expert engineers, to provide the highest quality thermal spray finishes.