



APTICOTE 800-89

Aluminum Silicon Hexagonal Boron Nitride Abradable

POETON
EST. 1898

Apticote 800-89 is an aluminium silicon alloy powder that is composited with hexagonal boron nitride.

This is an abradable coating designed for use in clearance control systems, specifically high temperature applications such as engines.

The inert nature of hexagonal boron nitride offers excellent corrosion protection, especially in marine environments, whilst also acting as a lubricant.

Apticote 800-89 is often used in applications where rotating components will come in to contact with the coating as a result of design. The coating will minimise wear whilst maximising gas path efficiency.

The composition of materials provides an excellent balance of erosion & corrosion resistance, abradability and friability.

A high temperature bond coat is required when using Apticote 800-89.

TYPICAL APPLICATIONS

- High pressure compressor seals
- Gas turbine engines
- Applications running against untipped titanium, steel or nickel blades

KEY FACTS

Classification	Abradable, aluminum based
Chemistry	AlSi/hBN
Morphology	Spheroidal
Coating Density	1.7g/cm ³
Service Temperature	≤450°C
Purpose	Clearance control
Process	Atmospheric plasma spray

TECHNICAL INFORMATION

Macrohardness	45 - 70 HR15Y
Bond Strength	10 - 17 MPa
Thermal Conductivity	25 W/m·K
Thermal Expansion	26 x 10 ⁻⁶ /K
Microhardness	850 - 1300 HV0.3



CENTRE OF EXCELLENCE

Apticote 800-89 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.