# APTICOTE 800-24

## Tungsten Carbide

POETON EST. 1898

**Apticote 800-24** is an extremely tough coating that resist fretting wear, composed of tungsten carbide as the hard material along with a cobalt matrix as a binder material.

Tungsten carbide coatings not only protect against fretting, but also against abrasive wear, erosion, sliding & impact wear and cavitation. These properties make it an ideal choice to use as a hard chrome replacement.

Apticote 800-24 is applied using our 3M & 9M thermal spray booths with the resulting dense coating providing good bond strength.

We recommend applying the coating to a maximum of 0.4mm as coatings any thicker than this are prone to cracking and is most suitable in non-corrosive media applications.

## KEY FACTS

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|---|---|
| Classification | Carbide, tungsten-based |
| Chemistry | 83WC 17Co |
| Morphology | Spheroidal |
| Purpose | Ductile wear resistance |
| Process | Atmospheric plasma spray |

## TECHNICAL INFORMATION

| | |
|---|---|
| Porosity | 0.5 - 3% |
| Macrohardness | >88 HR15N |
| Microhardness | 850 - 1300 HV0.3 |
| Service Temperature | 500°C |
| Wear Rate | < 8 $mm^3$ |
| Apparent Density | 2.7 – 5.9 $g/cm^3$ |
| Corrosion Resistance | Not recommended for corrosive media |

## TYPICAL APPLICATIONS

- Landing gear
- Pump seals
- Sucker rod couplings
- Exhaust fans
- Extrusion dies
- Crushing rollers

## CENTRE OF EXCELLENCE

Apticote 800-24 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.