



ELECTROLESS NICKEL

The Apticote 400 electroless nickel range, deposited by a complex solution, results in a remarkably even coating. From the range of coating options available, your requirements for wear resistance, corrosion protection (even in the most extreme environments) and aesthetic needs will be met.

Poeton's strength lies in our fully automated lines, with a unique control system that accurately maintains the bath chemistry and provides a constant deposition rate.

Apticote 400 electroless nickel coatings can be applied in very thin deposits (minimum 5µm) with uniformity and dimensional precision on most metallic substrates, including mild steel, stainless steel, cast iron, aluminium and titanium. This allows the designer to choose the substrate and mating parts on the basis of a need for strength, light-weight or corrosion resistance.

APTICOTE 400 OPTIONS	
Apticote 400N	For maximum toughness and general wear protection
Apticote 400N	Heat-treated for improved wear resistance
Apticote 400P	For maximum corrosion protection
Apticote 400D	For corrosion protection in extreme environments

KEY FEATURES & APPLICATIONS

Apticote 400 coatings exhibit a wide range of complementary properties, applicable in uses including:

- High wear resistance
- Can be hardened to 1,000Hv
- Excellent corrosion protection
- Superb accuracy of deposition
- Thickness range 5 - 50µm
- Completely uniform coverage
- No post-machining
- Plates on most metals
- Excellent anti-fretting
- Valves
- Pumps
- Spines and gears
- Hydraulic pistons
- Moulds and extruders
- Cutting knives
- Housings
- Fasteners and couplings
- Mirrors and reflectors
- Fuel connectors
- Sub-sea components
- Medical equipment

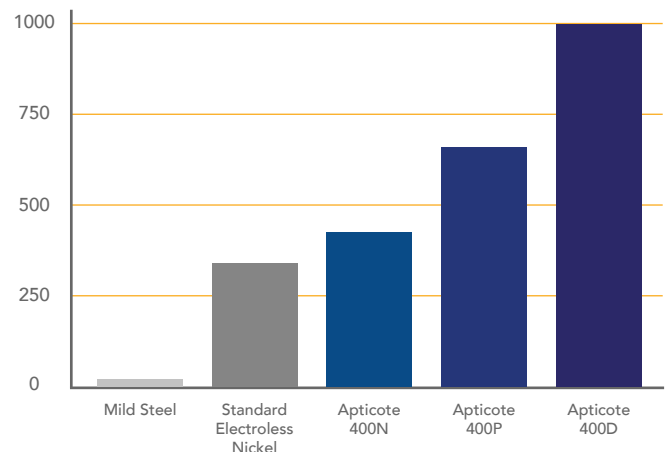
LOW WEAR & HIGH HARDNESS

In abrasive situations, Apticote 400 Electroless Nickel can reduce the wear on substrates like stainless steel by over 50%. In adhesive, metal-to-metal situations, Apticote 400 provides even greater wear protection. The hardness of the Apticote 400 nickel matrix can be increased to 1,000Hv by heat-treatment at 400°C. Our superior process control ensures the best coating quality, with high hardness without excessive residual coating stress to cause brittleness.

CORROSION PROTECTION

Corrosion protection by electroless nickel relies on the integrity of the coating; it is not a sacrificial layer and provides only a diffusion barrier. Hence, Poeton's high level of plating skill and quality controlled processing ensures deposits that have minimum defects.

SALT SPRAY ENDURANCE IN HOURS



SUBSTRATE MATERIALS

Using extensive R&D capabilities, Poeton have developed the optimum pre-treatment sequences for each substrate type, so that Apticote 400 can be applied with confidence to materials like titanium and aluminium, as well as the more usual range of engineering and stainless steels.

Disclaimer

The information contained in this leaflet is intended for guidance. Whilst every effort is made to understand the environment in which the coating is designed to work, success can only be determined by trials and in-service testing.