

Electroless Nickel Plating

Benefits

- Corrosion resistance
- Exceptional wearability
- 100% uniform thickness
- No post production machining necessary
- Soldering capability
- Cost effective

Deposit Properties

Physical Appearance

Phosphorous Content (wgt %)

Rockwell 'C' HK (100) As plated

Rockwell 'C' Heat Treated

Corrosion Resistance/Protection

(ASTM B-117) hours @ 25.4 microns

Magnetic Properties

High Phos

Semi-Bright

11-13

46-50

66-68

Excellent

1000+

Non-magnetic

Nickel Advantages

- Uniform coverage - both internally and externally
- Holds close tolerances within .001
- Even coating of threads, grooves, sharp corners and holes
- Eliminates the need for machining
- Can perform like stainless steel at less cost

Applications for Nickel

- Food processing equipment
- Chemical equipment
- Pumps
- Oil and gas
- Polymers/plastics
- Plastic injection molds

Substrates for Nickel

- Aluminum
- Steel
- Stainless Steel
- Copper
- Most bare metals

High Phosphorous

- High phosphorous ENP also offers maximum corrosion resistance to strongly acidic corrosive environments like oil, drilling, coal mining and pickling.
- High phosphorous is the most popular ENP choice because steel parts often perform like stainless steel.
- EN does not build up on edges or ends, providing a uniform 100% part thickness and coverage. Micro Plating ENP may allow for substitution of less expensive materials in place of stainless steel alloys or hard-to-machine substrates. Salt spray tests per ASTM B117 repeatedly show that high phosphorous ENP outperforms other EN coatings with 9% or less phosphorous by over 4 to 1.