



electroless nickel

electroless nickel has proved to be a very important method in the area of functional surface technology

The electroless separation of nickel-phosphate-alloys has several extraordinary advantages and meets very often requirements that could not be with other methods.

Typical application is when parts with a high precision fit needs to be coated with an absolutely uniform layer thickness. High corrosion protection und wear resistance are the exceptional attributes of this method.

advantages

- coplanar deposition
- high wear resistance
- high hardness
- high corrosion resistance
- even coating thickness
- good resistance to chemicals
- impermeable
- high ductility
- excellent gliding characteristics
- solderability and weldability
- magnetic or non-magnetic
- tarnish resistant
- internal coating possible
- appealing cosmetics



a wide range of applications







Base materials like steel, ceramics, non-ferrous metals, plastics as well as surfaces treated with diffusion can be coated with electroless nickel for a wide range of industries: machinery and appliances, automotive, chemical industry, food industry, electronics, mining, textile and printing industry, medical devices, aerospace.

The process portfolio of HOLDER includes baths with low, medium as well as high phosphorous content. Depending on the task HOLDER offers an individual level of corrosion protection and wear resistance as well as gloss level, magnetic or non-magnetic attributes, defined deposition rates and hardness.

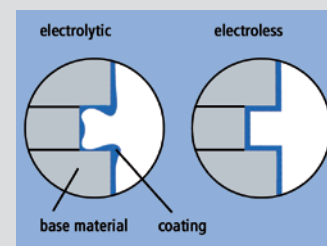
With the various chemical, physical and especially tribological attributes, every requirement can be met and every indication covered from a technological point of view.



technical data

-  **suitable materials**
 - steel and iron material
 - aluminium and aluminium alloys
 - non-ferrous metals as copper, brass, bronze
-  **procedures**
 - rack application
 - selective coating (reactor technology)
-  **phosphorous content**
 - high, medium or low phosphorous content for certain solutions
-  **high level of corrosion resistance**
 - vastly superior to galvanic nickel layers
-  **high hardness**
 - excellent lubricating capacity combined with high hardness
-  **temperature resistance**
 - up to 500° C (932° F)
-  **products:**
 - **Novatec** 710 EL
 - **Novatec** 720 EL
 - **Novatec** 730 EL

Uniform layer thickness with good dimensional stability
even with geometrically complex parts in drill holes and on the inner side of hollow parts.



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