

DURNI COAT® - DNC 520

DURNI COAT® - DNC-AL

Chemical nickel



surface  
technologies

# DURNI-COAT® - DNC 520 & DNC-AL

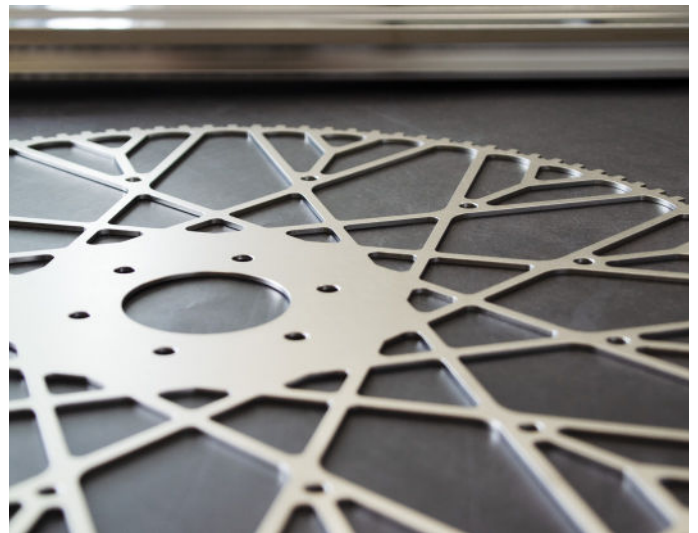
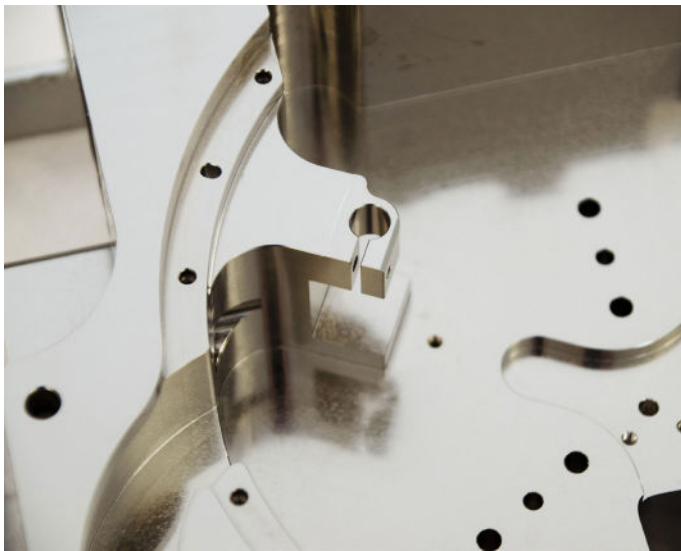
## Chemical nickel

### What is DURNI-COAT®?

DURNI-COAT®, in short DNC, is a surface treatment to the base material, the process and adapted application. DNC surface treatment is used especially for wear and corrosion protection of components in all industries and can also meet other functional requirements.

The plating of DURNI-COAT® coatings occurs without external current source and is based on the reduction of nickel ions present in the aqueous solution to nickel metal. The hypophosphite ions in the solution form the chemical reaction partner and provide the electrons needed for the reaction and are oxidized to orthophosphite during the reaction itself. In addition, they are also responsible for the phosphorus content of the plated DURNI-COAT® coatings.

- All low-alloy ferrous metals
- Cast iron alloys
- High-grade steels, including stainless steel
- Non-ferrous metals such as copper, brass and bronze
- Aluminum alloys
- Titanium alloys
- Sintered metals
- Rare earth metals like Tungsten, Molybdenum etc
- Other metallic structured materials (after prior test treatment)



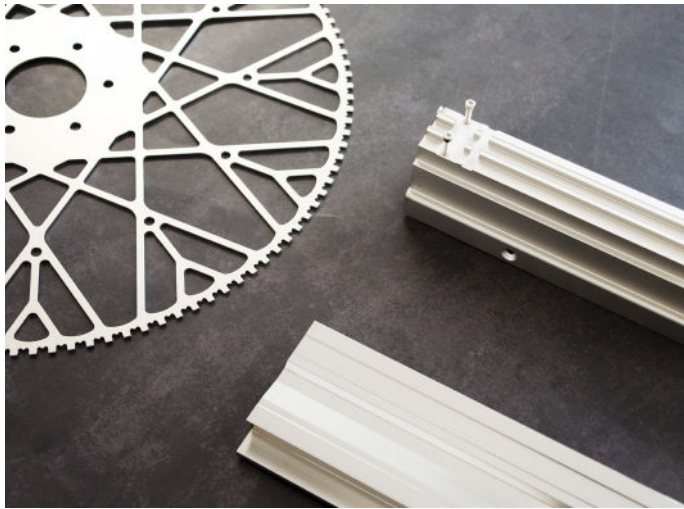
### DURNI-COAT® coatings are ideal for applications with special requirements

- Excellent corrosion resistance
- Erosion resistance
- High wear resistance
- Uniform coating structure
- Good dimensional stability
- Excellent hardness
- Magnetic and/or non-magnetic properties depending on type
- Good contact of DNC and solderable properties
- Electrical conductivity
- Good chemical resistance

### Suitable metals for DURNI-COAT®:

The range of metals suitable for DURNI-COAT® includes all the metals which are used in the industry:

Main procedure	Alloy	Max. Dimension	Max. Weight / part
DNC 520	Steel and stainless steel Copper alloys	2.100 x 1.000 x 500 mm	1000 kg
	Titanium and other exotic metals	800 x 700 x 500 mm	200 kg (higher weight on request)
DNC-AL	For aluminum only	1.900 x 750 x 500	500 kg
General standard	ISO 4527 : 2003		



Coating property	Specification (detailed specification on demand)
Phosphorus content	9-13%
Field strength til breakage	0,5 - 1,0%
Wear	≤35 mg, Taber abraser test with CS 10 wheel after 1,000 revolutions
Hardness	approx. 570 HV, after heat treatment up to 1,000 HV
Corrosion resistance	More than 200 hours resistance according to DIN EN ISO 92271 (acetic acid salt spray test)
	Kesternich test, resistance according to DIN 50 0181): >3 cycles SFW 0.2