

Nichem[®] MP 400

Mid-phosphorus electroless nickel



General Metal Finishing

Electroless nickel

atotech.com



Ultra-bright mid-phosphorus electroless nickel process

LEAD &
CADMIUM-
free

ELV, ROHS
AND WEEE
compliant

Sustainable process that fulfils the highest production quality demands

Nichem[®] MP 400 is an ultra-bright mid-phosphorus electroless nickel process developed to be environmentally friendly. It contains no toxic substances such as Pb and Cd, ETDA and boric acid. Nichem[®] MP 400 is an ELV-, RoHS- and WEEE-compliant process capable of forming NiP deposits with very high gloss values ranging from 300 – 600 GU.

Nichem[®] MP 400 meets the highest production quality demands and provides the flexibility needed to accommodate a wide range of surface types and multiple substrates within one single process.

It offers nickel-phosphorus coatings with a phosphorus content of 7 – 9%, resulting in “as-plated” hardness in the 550 – 650 HV_{0.1} range.

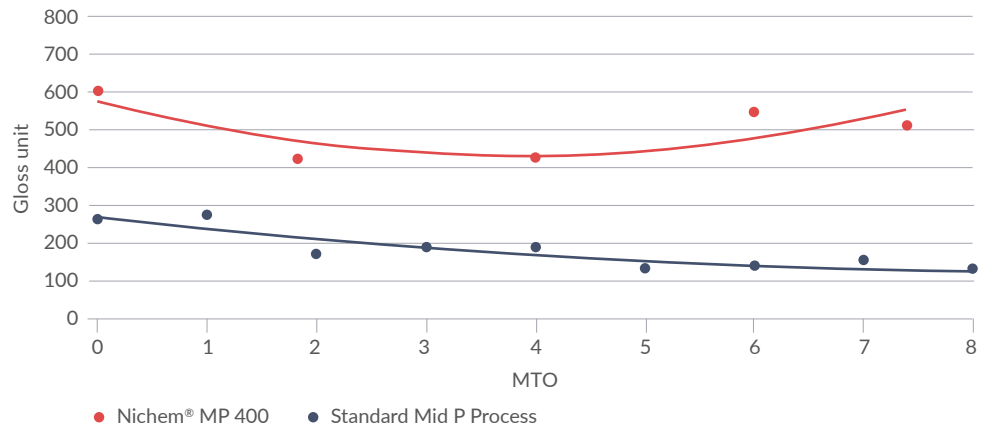
Nichem[®] MP 400 is suitable for a wide variety of applications requiring a very bright electroless nickel deposit in consumer electronics, white goods, furniture, connectors and automotive goods.

Extremely bright and stable mid-phosphorus electroless nickel process



Image 1:
Cover for precision laser device
Image 2:
Flange for medical device

Gloss values of Nichem® MP 400 versus bath life



Deposit properties

Nichem® MP 400 forms homogeneous, bright, lustrous NiP deposits with very high gloss values ranging from 300 – 600 GU. The process yields nickel-phosphorus coatings with a phosphorus content of 7 – 9%. In addition to excellent corrosion protection, Nichem® MP 400 exhibits an “as-plated” hardness in the 550 – 650 HV_{0.1} range.

Process properties

The Nichem® MP 400 mid-phosphorus process exhibits excellent bath stability. This versatile process is specially formulated to be tolerant to low bath loading and shows good self-initiation on copper and its alloys. The Nichem® MP 400 also exhibits excellent adhesion on zincated aluminum alloys and shows high tolerance to metallic contamination.

Features and benefits

- Consistently high brightness throughout bath life
- Pb- and Cd-free (ELV and WEEE/RoHS compliant)
- Wide window of operation
- Easy initiation at low surface area conditions (0.1 dm²/l)
- Stable at high surface area conditions (up to 1.4 dm²/l)
- Excellent initiation on brass and copper
- Highly suited to multiple substrates, ideal for job shops

