

NiKlad™ ELV 811

Electroless Nickel Coatings

The Lead-And Cadmium-Free HIGH Phosphorus Ni-P Alloy

MacDermid NiKlad ELV 811 is the environmentally compliant high phosphorus nickel alloy coating system developed specifically to enable metal finishers and design engineers to conform to recycling initiatives.

NiKlad ELV 811 eliminates lead and cadmium from being used as stabilizers and brighteners in EN coatings and operates in a similar fashion as a conventional EN. It is a semi-bright system that produces excellent quality, highly corrosion resistant deposits at a deposition rate of 12-14 microns per hour. NiKlad ELV 811 meets strict performance specifications outlined in a range of recently enacted regulations, including ELV (End of Life Vehicle), WEEE (Waste Electrical and Electronic Equipment), RoHS (Restriction of Hazardous Substances) and others from major automotive manufacturers and OEM's.

For high phosphorus EN coatings, count on the company that says "Yes We Can." MacDermid.



Key Features

- **Lead-and cadmium-free chemistry for better recycling capability**
- **Operates in the same way as conventional EN systems**
- **Deposition rate of 12-14 microns per hour**
- **Outstanding stability, works well in polypropylene and stainless steel tanks and equipment**
- **Deposit provides excellent corrosion protection to ferrous and aluminum alloys**

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 **MacDermid**
Industrial Solutions

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MacDermid ELV's Meet Your Needs

MacDermid offers a full line of lead-and cadmium-free electroless nickel coating systems under the name **NiKlad ELV**. Together, they provide enhanced uniform deposits, predictable plating rates and exceptional corrosion resistance that cover the conventional range of 10-12% nickel phosphorus deposits. Additionally, NiKlad ELV systems run in existing, standard equipment with no loss of performance compared to older systems.

NiKlad 811 Deposit Properties

Density Range (g/cm ³)	7.6–7.8
Phosphorus Content (% by weight)	10.0–12.0
Melting Range (°C)	880–980
Deposit Hardness: (KNOOP & Rockwell C)	475–550 HK ₁₀₀ 42–47 Rc (as plated) 800–950 HK ₁₀₀ 62–67 Rc (heat treated @ 400 °C for 1 hour)
Wear Resistance Taber Wear Index: (CS-10, 1000 g)	18–24 mg/ 1000 cycles (as plated) 9–15 mg/ 1000 cycles (heat treated @ 400 °C for 1 hour)
Magnetic Tendency	Non-Magnetic (as plated & up to 275 °C for 3 hours)
Electrical Resistivity (μΩ cm)	90–110
Salt Spray (per ASTM B117 – 25.4 μm deposit)	> 168 hours
Nitric Acid Test (Concentrated nitric for 30 seconds)	PASS

YES WE CANSM

It takes more than innovative, high performance products and superior technical service to help our customers compete and win in today's global marketplace. It takes a total commitment to understanding their needs and the ability to provide the right solutions—every time.

When success is your only goal, trust the company that says "Yes We Can."



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