



BENEFITS

- Excellent wear resistance
- Can be applied to a variety of ferrous and non-ferrous substrates
- Lower COF without polymers or dry lubricants
- Uniform coating deposition
- No need for secondary grinding
- Excellent corrosion resistance
- Non-shedding and non-outgassing
- Complies with FDA and USDA codes

TYPICAL APPLICATIONS

- Composite Tooling
- Plastic Molding Equipment
- Semiconductor Equipment
- High Temperature Valve Applications
- Aerospace Applications

HARDNESS MEASUREMENTS PER ASTM B578

Sample Description	Knoop Hardness	Rockwell Hardness
NEDOX PF-F	HK ₂₅ 429	42
NEDOX PF-F Heat treated: 650°F for 2hrs	HK ₂₅ 773	62
High Phosphorus Electroless Nickel: 650°F for 2hrs	HK ₂₅ 809	63

Nedox PF-F™

Low Friction and Wear Resistance Without Polymers

Many polymeric or dry lubricant coating systems have a limitation in regards to temperature, since they can only function up to 500°F. In addition, polymers and dry lubricants are not always conducive to environments where particulate generation is undesirable. For these applications, General Magnaplate developed Nedox PF-F. The composite ceramic, nickel alloy Nedox PF-F allows it to operate at temperatures up to 1200°F and still maintain low friction properties. The coating offers good corrosion resistance, excellent abrasion resistance, low COF and hardness. It can be applied to ferrous and non-ferrous alloys.

COEFFICIENT OF FRICTION MEASUREMENTS PER D 1894-01

Coating	Static COF	Kinetic COF
NEDOX PF-F As Plated	0.120	0.126
NEDOX PF-F Baked at 700°F	0.145	0.160
High Phosphorus Electroless Nickel As Plated	0.199	0.256
Hard Chrome	0.234	0.397

CORROSION PERFORMANCE

Salt spray (salt fog) testing was conducted in accordance with ASTM B117. Steel panels were coated with Nedox PF-F. The panel showed no sign of corrosion after 1000 hours with high phosphorus electroless nickel underlay required.

CONTACT ANGLE MEASUREMENTS

Advancing contact angle is 99.7 degrees, when heat treated at 700°F is 91.0

Contact angle measurements indicate the amount of surface energy present. The greater the angle, the lower the surface energy. In general, the greater the surface angle, the greater the hydrophobic property and ability to clean the surface.

TABER ABRASION MEASUREMENTS PER ASTM D 4060 CS10 WHEEL

Sample Description	Weight Loss (mg/1000 cycles)	Weight Loss (mg/10000 cycles)
NEDOX PF-F	20.8	68.1
NEDOX PF-F Heat treated: 700°F for 1hr	9.2	24.85
High Phosphorus Electroless Nickel As Plated	25.5	60.8