



TM 103 is a uniform nickel phosphorous coating for corrosion resistance, hardness and lubricity. It can be plated on all ferrous metals & most non-ferrous metals. Uniformity & accuracy of the deposit of TM 103 is maintained through strict quality control techniques. With TM 103, there is no edge build-up. Close tolerances can be maintained within .0001. It covers hard-to-reach areas that are difficult or impossible to coat with electrolytic or line of sight coatings. Uniform deposits on the most complex shapes are made simple.

USER BENEFITS

Mold Release
Good Wear Resistance
Natural Lubricity
Encapsulation of Part

Uniform Deposit Thickness
Superior Corrosion Resistance
Porous-Free Coating
Complies with FDA & USDA Regulation

PROPERTIES

PROPERTIES	TYPICAL VALUE
Phosphorous Content, wt. %	10-11.5
Melting Point (eutectic)	
°C	880
°F	1620
Coefficient of Thermal Expansion, $\mu/m^{\circ}C$	13-15
Thermal Conductivity, cal/cm/sec/ $^{\circ}C$	0.0105-0.0135
Electrical Resistivity, microhm-cm	50-100
Magnetic Properties	Non-Magnetic
Hardness	
Knoop Hardness	
100g load, 3.0 mil deposit, steel	
As Plated	500-580
Heat Treated @	
3-hours, 590° F	800-950
Wear Properties	
Taber Abraser Wear Test	
Index Value wgt. Loss mg/1000 cycles	
As Plated	
Heat Treated @	15-22
3-hours, 590° F	4-8
Corrosion Related Properties (test results may vary due to surface condition or part).	
Salt spray test* (ASTM B 117) 95° F. (35° C)	
5% NaCl, 1.0 mil deposit, hours to first corrosion spot	
Aluminum	1,000+
Carbon Steel	1,000+
RCA Nitric Acid Test	
Conc. Nitric Acid 42° Be'	
30 sec., room temperature, 1.0 mil, steel	TM 103 Meets or Exceeds
Hydrochloric Acid Test	
50% HCl, 3 min., room temperature	
1.0 mil, steel	TM 103 Meets or Exceeds



36" diameter ball valves. TM 103 provides a uniform corrosion resistant coating for the petroleum industry.

APPLICATIONS:

Automotive, Industrial, Aircraft/Aerospace, Computer, Printing, Chemical/Petroleum, Food/Meat Processing



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