



# TM 129

is a unique high-performance, low-phosphorous electroless nickel. It is designed for functional engineering applications. TM 129 meets MIL-C-26047B and AMS 2405B specifications. It has similar properties to medium boron nickel. This coating is excellent when wear resistance, erosion resistance, high temperature stability & hardness are required with a uniform thickness.

### USER BENEFITS

**High “As deposited” Hardness 55-60 RC**

**Superior Wear Resistance**

**Ideal for Hard Surfacing of Aluminum, “Even tempered Alloys”**

**Corrosion Resistance in Alkaline Environments**

**Uniform deposits on a wide range of substrates such as:**

- **Cast iron, Stainless Steel, Plastics, Ceramics, Titanium & Al. Alloys**

**Easily Soldered w/RMA Fluxes**

**Excellent Abrasion Resistance**

**Excellent Erosion Resistance**

### PROPERTIES

Phosphorous Content, wt.%

Corrosion Resistance of 1 mil thick deposit

Neutral Salt Spray Test (ASTM B-117)

2024 Aluminum

1010 Carbon Steel

Thickness Control (for a .001 deposit)

Minimum Thickness

Maximum Thickness

Hardness

As Deposited

Heat Treated

4-hours/590 degrees F

Melting Point

Magnetic Properties

Thermal Conductivity(cal/cm/sec/degrees C)

Electrical Resistance

(microhm-cm)

As deposited

Heat treated 750 degrees F/1-hour

Wear Properties

Taber Abraser Wear Test

(Taber Wear Index-TWI)

Wgt. Loss mg./1000 cycles

As deposited

Heat treated 750 DEGREES F/1-hour

Falex Wear Test (mg. wgt. Loss)

### TYPICAL VALUE

4% Less Phosphorous by Weight

48 hours

48 hours

+/- .0001

.0001

.003

55-60 Rockwell C

600-700 Vickers

950-1000 Vickers

Up to 2400 DEGREES F

Slightly Magnetic

0.0105-0.0135

20-30

10-20

### APPLICATIONS

Automotive:

Gears, Rocker Arms & Steering Unit Components

Industrial:

Molds, Dies, Hydraulic/Pneumatic Equipment, Cylinder Valve Components & Pumps

Chemical Processes:

Heat Exchangers, Filter Units, Pumps & Mixing Blades

Process Industries:

Printing Cylinders, Textile Heddles, Rolls, Spinnerettes & Extruding Screws

Electronics:

Contacts, Rotors, Solenoids, Plastic Enclosures, Heat Sinks, Brakes & Drive Mechanisms for Computers

Aerospace:

Engine Parts, Compressor Sections, External Engine Parts, Composites & Structural Parts

Oil & Gas:

Pumps, Valve Components, Tubing, Tees, Well Head Equipment & Oil Tools

Glass Manufacturing:

Plungers & Molds



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