



# ELECTROLESS NICKEL PLATING



## Electroless Nickel Plating

Electroless nickel offers greater uniformity than conventional electroplating. IFT can control electroless nickel deposits to +/- 0.00005" per side, with no buildup on edges and uniform coverage on all surfaces of intricately shaped parts. Electroless Nickel also offers outstanding corrosion protection. A 0.001" coating thickness can exceed 1000 hours of salt spray testing.

The many different types of Electroless Nickel plating available offer a wide range of properties which can be tailored to suit your needs. Electroless Nickel is used in numerous applications, including; injection molding tools & dies, pumps, valves & chemical industry, general machinery applications, automotive industry, medical industry, appliance industry, electronics industry, aerospace industry, decorative metals industry, food industry, salvage and repair, among many others.

## Advantages of IFT's Electroless Nickel Plating

- Awarded preferred supplier status with many industry leading companies
- IFT recognized as a leading authority in Electroless Nickel plating
- Superior process controls
- IFT only uses quality certified coatings
- Superior accuracy, typically exceeds industry standards
- Environmentally responsible company
- "Soft touch" part handling
- Strategic alignments with world-class chemistry suppliers and technical resources
- Many additional, supporting processes for a one-stop source
- In house testing lab

## Technical Information

<b>Density</b>	7.75 to 8.5 gm/cm <sup>3</sup>
<b>Electrical Resistivity</b>	Up to 20 μ-cm
<b>Engineering Properties</b>	Deposit Structure Deposit Uniformity
<b>Tensile Strength</b>	Exceeds 700 MPa (100kpsi)
<b>Hardness</b>	500 to 925 HK100 45 to 72 HRC
<b>Resistances</b>	Wear Abrasion Corrosion Low Coefficient of Friction

## IFT's Electroless Nickel Plating Processes

Low Phosphorus (1%-4%) -	Up to 60 Rc hardness as deposited, alkali resistance, solderable, cadmium, chrome and lead free
Medium Phosphorus (5%-9%) -	Cadmium & lead free, high brightness finish, cadmium, chrome and lead free
High Phosphorus (10%-13%) -	Semi-bright to bright finish, cadmium, chrome and lead free
Electroless Nickel with PTFE -	Superior lubricity, cadmium, chrome and lead free



<b>IFT'S Electroless Nickel Plating Capabilities</b>	
<b>Plating Processes</b>	<b>Substrates</b>
Low Phosphorus (1%-4%) Electroless Nickel	Steel
Medium Phosphorus (5%-9%) Electroless Nickel	Stainless Steel
High Phosphorus (10%-13%) Electroless Nickel	Aluminum
Electroless Nickel Composite	Brass
Electroless Nickel with PTFE	Copper
Cadmium Free Electroless Nickel	Titanium
Chrome Free Electroless Nickel	Inconel
Lead Free Electroless Nickel	<b>Production Capacity</b>
Duplex Plating	Small precision parts
<b>Processed By.With:</b>	Prototypes
Masking / Selective Coating	High volume production orders
Brush Plating	<b>Lead Times</b>
Rack Processing	Short Lead Times Typical
Barrel Processing	Expediting Available
Highly-detailed specification parts	<b>Testing Services</b>
<b>Pre-plate Operations</b>	Salt Spray (ASTM B117)
Stress Relieving	Humidity
Mechanical Cleaning	Hardness
Solvent Cleaning	Adhesion
Ultrasonic Vapor Degreasing	Dimensional/Thickness
Masking	Porosity/Ferroxyl, Alizarin
Abrasive Blasting	SEM
Chemical Cleaning	Cross Section
Pickling	Stress Testing
Etching	Metallurgical
<b>Postplate Operations</b>	Chemical Analysis
Adhesion Baking	<b>Customer</b>
Hydrogen Embrittlement Relief Baking	Manage Customer's Patented Processes
Heat Treating to harden the deposit	
Assembly	Provide Exclusive Production Work Centers
Special packaging	

<b>IFT's Industry Certifications</b>
Registered small business
ITAR Registered
ROHS Compliant
NADCAP Accredited
TS-16949 Registered
AS-9100 Registered
ISO-9002 Registered
ISO-14001 Registered

<b>IFT's Industry Specifications</b>
Some of our 1400+ specs
QQ-P-35
AMS QQ-P-35
AMS 2404
AMS 2405
AMS 2700
ASTM A967
ASTM A380
ASTM B 607
ASTM B 656
AMS-C-26074
MIL-C-26074
MIL-DTL-26074
ISO 4527
MIL-S-5002
MIL-DTL-5002
MIL-DTL-32119
MIL-STD-171

<b>IFT's Prime Customers</b>
Boeing
Lockheed Martin
Space X
BAE
Caterpillar
General Dynamics
Rock Island Arsenal
NASA
Honeywell
Remington
Borg-Warner
Raytheon
Federal Mogul
Cooper Bussman

<b>IFT's Services &amp; Capabilities</b>
Electroless Nickel Plating
Type II Class I Anodizing
Dry Film Lubricant Coatings
Phosphate Coating Services
Non-Destructive Testing Services
Passivation Services
Conversion Coating Services
Painting and Special Coatings
Media Blasting

**Expanding Capabilities:**

IFT frequently works with our customers to add to our capabilities to meet their needs. Our flexibility has allowed us to add processes to our offerings, increase the capacity of our lines for both physically larger parts and larger volume orders, as well as developing entirely new processes to solve the challenging issues our customers face. If you are struggling to find a dynamic growth company with a solution to a problem with part wear or corrosion,

**Call IFT Today.**



**“Improving lives  
by improving  
products.”**

[www.IFTWorldwide.com](http://www.IFTWorldwide.com)

**Contact us for more information**

info@iftworldwide.com      sales@iftworldwide.com  
 1302 W. Sample St.      2719 N. Emerson Ave.      3722 Foundation Court  
 South Bend, IN 46619      Indianapolis, IN 46218      South Bend, IN 46628  
 Toll Free: 800.207.2516      Toll Free: 1.866.393.6065      Phone: 574.287.0642  
 Phone: 574.287.2941      Phone: 317.635.8565      Fax: 574.807.8846  
 Fax: 574.287.2970      Fax: 317.635.8767