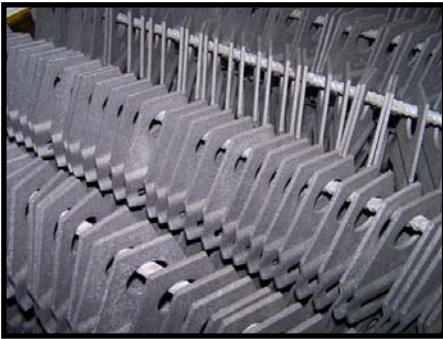




PHOSPHATE COATINGS



Phosphate Coatings

Phosphate coatings are “conversion coatings.” Unlike plating processes, in which a layer of metal is deposited on the surface of the substrate, during the phosphating process the substrate participates in the reaction and becomes a component of the coating.

The surface of the metal is chemically changed to a new structure that provides a porous, yet corrosion resistant surface to which the rust inhibitors, oils, paints, or other lubricants can penetrate and attach. The attachment site and absorption area are far superior to the base metal.

Phosphate coatings are formed from an interaction with the surface of the metal. Therefore, the thickness of the coating is dependent upon the porosity of the coating it forms. Once the phosphate coating foams and the surface of the substrate is completely sealed off from the phosphating solution, the chemical reaction ends. The resulting surface is a non-metallic crystalline coating containing iron, zinc, and/or manganese. Phosphate coating can be applied by spray or immersion processes.

Advantages of IFT’s Phosphate Coatings

- Awarded preferred supplier status with many industry leading companies
- IFT is a leading authority in phosphate coatings
- Superior process controls
- IFT uses only quality certified chemistry
- More consistent standardization of formulation
- Superior accuracy, typically exceeds industry standards
- Environmentally responsible company
- “Soft touch” part handling
- Strategic alignments with world-class chemistry suppliers and technical experts
- Greater performance with better value, at a competitive cost
- Many additional, supporting processes for a one-stop source
- In house testing lab
- Process managed by college deegreed and experienced professionals
- In house testing lab

Phosphate Coating Processes

Zinc Phosphate
Manganese Phosphate
Iron Phosphate
ImagePhos™
Micro-Crystalline Fine Grain
Macro-Crystalline Coarse Grain
Grain Refined
Calcium-Modified

Example of IFT's Customer Solutions

IFT worked with a global automotive component supplier on the development of a highly-controlled manganese phosphate coating process. The components were specially made and were installed into “identical” engines that were used to qualify engine oils to SAE standards. The manganese phosphate coating process needed to consistently yield identical coating results so that wear of the components could be attributable to the specific oil used rather than inconsistencies in the engine components or coatings used.



IFT's Phosphate Coating Capabilities	
Types	Processed by/with
Zinc Phosphate	Rack Processing
Manganese Phosphate	Barrel Processing
Iron Phosphate	Phosphate w/ Oil Testing
ImagePhos®	Thickness
Micro-Crystalline Fine Grain	Substrates
Macro-Crystalline Coarse Grain	Steel
Grain Refined	Cast Iron
Calcium-Modified	Powdered Metal
Pre-Phosphate Treatments	Inspection Services
Stress Relief	DCMA Inspection on-site available
Masking	Production Capacity
Abrasive Blasting	Small Precision Parts
Mechanical Cleaning	Prototypes
Chemical Cleaning	High Volume Production Orders
Grain Refining	Production Capacity
Post-Phosphate Treatments	Small Precision Parts
Hydrogen Embrittlement Relief Baking	Prototypes
Water Soluble Oil	High Volume Production Orders
MIL-PRF-3150 Oil	Customer Support
Chromic Acid Sealer	Manage Customer's Patented Processes
Non-Chrome Sealer	
Rust Inhibitors	Provide Exclusive Production Work Centers
Dry to Touch Oils	

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

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

Industry Specifications
Some of our 1400+ specs
MIL-DTL-16232
DOD-P-16232
MIL-P-16232
TT-C-490
AMS 2473
AMS 2480
AMS 2481
Mil-S-5002
MIL-STD-171
MIL-PRF-3150

IFT's Services & Capabilities
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.”**
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