Plating Quick Reference

	Hard Chrome	Electroless Nickel	Zinc	Zinc Phosphate
Process Description	An electro-deposit of chromium on a variety of substrates, but most commonly ferrous based.	A chemical reaction that takes place at the surface of the substrate.	An electro-deposit process that is applied to ferric substrates.	A formation linked with the carbon content of the substrate to provide corrosion protection.
Wear resistance	Excellent wear properties with an extremely low coefficient of friction	Good wear resistance with the ability to be heat treated to a hardness of 70 Rc	Not intended as a wear coating	Not intended as a wear coating
Typical coating corrosion resistance	Above Average	Excellent	Very Good (Cathodic protection)	Good
Appearance	Bright white shine when polished.	Bright shine if plated on a smooth substrate. Has a slightly yellow tint.	White satin finish. Can be plated to be silver, gold or black.	Grey/black flat finish.
Max Coating Thickness♣	0.020”	0.003”	0.001”	0.001”
Throwing power	Poor	N/A	Good	N/A
Special Features	- Extremely low coefficient of friction. - Has an extensive micro-crack network that can be used to hold lubricants. - Performs well in environments with abrasives with a corrosive atmosphere	- Delivers the same surface finish that existed on substrate surface - Provides 100% perfectly even plating over entire surface even over non-uniform shapes. - Performs well in a wide variety of corrosive environments including marine and sour service.	- Is anodic to iron and will protect nearby exposed steel. - An inexpensive method of providing good corrosion protection with an aesthetically pleasing appearance.	- Provides 100% perfectly even plating over entire surface. - Economical corrosion protection for components in mildly corrosive environments.
Plating time (per thou thickness)*	0.001”/hr	0.0005”/hr	0.0008”/hr	0.0008”/hr
Finishing	Requires finish grinding and polishing to be smooth.	Smoothness depends on the finish before plating.	Smoothness depends on finish before plating	Texture is flat and independent of any post or pre-alterations

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♣ Maximum thickness can be increased depending on part geometry

* Plating rates may vary