Finishing Method	Characteristics
Anodizing	Suitable for: Aluminum Highly resistant to corrosion Can be clear to dark gray, or dyed in any color with tempered alloys Conductivity: None Can be painted effectively Poor resistance to abrasion Usable with parts of close tolerance
Baking	Suitable for: Heat treated, high carbon steel Not resistant to corrosion Material will be slightly stained finish Treatment should be applied immediately following electro-plating. This prevents hydrogen making the material brittle
Black Oxide	Suitable for: Steel (standard and stainless) Fair resistance to corrosion on indoor applications. Exterior applications: poor corrosion resistance Black in color Appearance can be enhanced via wax and oil dip treatments Will not alter the dimensions of the part
Cadmium (Type I)	Suitable for: All metals Excellent resistance to corrosion Gray in color A common finish for electroplating
Cadmium (Type II)	Suitable for: All metals Excellent resistance to corrosion Golden in color. Sometimes black, olive or clear Can be used over Type I treatment Excellent resistance to humidity and to moisture Excellent results from painting
Degreasing	Suitable for: All metals No resistance to corrosion Will not produce a change in color Will only remove oils from the surface, not solids
Nickel (Bright)	Suitable for: All metals Resistance to corrosion depends on thickness, generally good Bright silver in color Good for aesthetically decorative finishing
Passivate	Suitable for: Stainless steel Excellent resistance to corrosion No change in color results from finishing No change in dimension of part All surface iron oxides removed Treat with light oil following finishing to prevent rust corrosion A cleaning process rather than a traditional finish
Phosphate	Suitable for: Steel Fairly good resistance to corrosion. Good resistance to rusting Gray in color
Pickling	Suitable for: All metals No resistance to corrosion No change in color after treating Effective removal of scale, rust or other evidence of corrosion
Silver	Suitable for: All metals Excellent resistance to corrosion Bright silver in color Electrical conductivity: Excellent Good for aesthetic finishing Easy to tarnish Excellent for soldering Lubricity: excellent Excellent for anti-galling
Tin (Bright)	Suitable for: All metals Good resistance to corrosion Silver gray in color Good for soldering Results last a long time Not usable in low temperatures
Tin (Hot Tin Dip)	Suitable for: All metals Good resistance to corrosion Silver gray in color Excellent for soldering Not easy to control thickness of finish Cannot be used with parts of irregular shape, with tight tolerance or with recesses or hollows in the surface
Zinc (Type I)	Suitable for: All metals Very good resistance to corrosion Blue-gray in color Initially bright after treating, color will fade over time Galvanizes base metal Exposure to weather conditions (for exterior parts) results in dull gray color
Zinc (Type II)	Suitable for: All metals Very good resistance to corrosion Golden in color Works in the same way as Cadmium (Type II) Prevents – or at least delays – corrosion of zinc