

# Finishes

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**Anodize****Anodize (chromic)**

**Metal:** Aluminum

**Corrosion Resistance:** Excellent

**Color:** Clear — Dk. gray depending on material hardness

Tempered alloys can be dyed any color

Type I, Class 2

**Characteristics:** Non-conductive

Good paint base

Poor abrasion resistance

Good for close tolerance parts

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**Baking****Baking**

**Metal:** High carbon steel — heat treated

**Corrosion Resistance:** None

**Color:** Slight staining

**Characteristics:** Required immediately after electrodeposit plating of parts to prevent hydrogen embrittlement

Improved hardness

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**Black Oxide****Black Oxide**

**Metal:** Steel & Stainless

**Corrosion Resistance:** Indoor — satisfactory

Outdoor — poor

**Color:** Black

**Characteristics:** Poor abrasion resistance

Supplementary wax & oil dip will improve appearance & corrosion resistance

No dimensional change of part

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**Cadmium****Cadmium, Type I**

**Metal:** All

**Corrosion Resistance:** Excellent

**Color:** Bright silver gray

**Characteristics:** Most commonly used plating

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**Cadmium****Cadmium, Type II**

**Metal:** All

**Corrosion Resistance:** Excellent

**Color:** Golden

**Characteristics:** Chromate treatment over Type I

Excellent resistance to moisture & humidity

Excellent paint base

May be chromate treated black, olive drab, or clear but is usually golden (yellow irridite)

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**Degreasing****Degreasing**

**Metal:** All  
**Corrosion Resistance:** None  
**Color:** No change  
**Characteristics:** Removes oils but not solids

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### Bright Nickel

### Bright Nickel

**Metal:** All  
**Corrosion Resistance:** Resistance is a function of thickness.  
.0005 thick provides good resistance  
**Color:** Bright Silver  
**Characteristics:** Good Decorative Finish

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### Passivate

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**Metal:** Stainless  
**Corrosion Resistance:** Excellent  
**Color:** No change  
**Characteristics:** No dimensional change  
Removes all iron oxides from metal surface  
Light oil after to prevent rusting  
Basically a cleaning process

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### Phosphate (rust preventative)

### Phosphate

**Metal:** Steel  
**Corrosion Resistance:** Fair to good  
**Color:** Grayish  
**Characteristics:** Makes steel more rust resistant

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### Pickling

### Pickling

**Metal:** All  
**Corrosion Resistance:** None  
**Color:** No change  
**Characteristics:** Cleaner to remove scale, corrosion or rust

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### Silver

### Silver

**Metal:** All  
**Corrosion Resistance:** Excellent  
**Color:** Bright silver  
**Characteristics:** Excellent conductivity  
Good decorative finish  
Tarnishes easily  
Excellent solderability  
Excellent lubricity & smear characteristics for anti-galling uses

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### Bright Tin

### Bright Tin

**Metal:** All  
**Corrosion Resistance:** Good  
**Color:** Silver gray

**Characteristics:** Good solderability  
Excellent shelf life  
Not good for low temperature applications

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## Hot Tin Dip

### Hot Tin Dip

**Metal:** All

**Corrosion Resistance:** Good

**Color:** Silver gray

**Characteristics:** Excellent solderability

Thickness is difficult to control

Should not be used on irregular shaped parts, ones with deep recesses or parts with tight tolerances after plating

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## Zinc

### Zinc, Type I

**Metal:** All

**Corrosion Resistance:** Very good

**Color:** Bright blue gray

**Characteristics:** Does not maintain bright surface for a long period of time

Galvanic protection of base metal

Weather exposure changes zinc to dull gray

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### Zinc, Type II

**Metal:** All

**Corrosion Resistance:** Very good

**Color:** Golden

**Characteristics:** Retards or prevents formation of white corrosion products on zinc surface

Same as Cadmium Type II

