

Material	Characteristics
Aluminum (2024)	Magnetic: No Suitable for aeronautic projects: Yes Weighs only a third as much as steel Hardness can be enhanced with heat treatment Electrical conductivity is a 30% that of copper Heat conductivity: 70 BTU/hr/ft ² /°F/ft Corrosion resistance can be enhanced via anodizing
Aluminum 6061 / 7075	Magnetic: No Suitable for aeronautic projects: Yes Weighs only a third as much as steel Hardness can be enhanced with heat treatment Electrical conductivity is a 30% that of copper Heat conductivity: 70 BTU/hr/ft ² /°F/ft Corrosion resistance can be enhanced via anodizing
Aluminum 1100 / 3003 / 5052	Magnetic: No Suitable for aeronautic projects: No Weighs only a third as much as steel Not suitable for heat treatment Electrical conductivity is a 30% that of copper Heat conductivity: 70 BTU/hr/ft ² /°F/ft Corrosion resistance can be enhanced via anodizing Softer alloys, suitable for gaskets Common alloy used in commercial applications
Beryllium Copper (Alloy 25)	Magnetic: No Electrical conductivity: Between 17 and 22% that of copper Heat conductivity: 68 BTU/hr/ft ² /°F/ft Formable in annealed state. Hardenable via heat treating Resistant to corrosion Common usage: springs, washers and clips Results in effective plating
Brass (Alloy 260 / 70/30 / Copper/Zinc)	Magnetic: No Electrical conductivity: 26% that of copper Heat conductivity: 70 BTU/hr/ft ² /°F/ft Use spring temper for a cleaner cut and flatter part, compared to soft tempered or half hard brass Results in highly effective plating
Copper (Alloy 110 / Electrical tough pitch / 99.9% Copper)	Magnetic: No Resistant to corrosion Electrical conductivity: Extremely high (100% that of copper) Thermal conductivity: Extremely high (225 BTU/hr/ft ² /°F/ft) Results in effective plating Can be sealed in a highly effective manner
Phosphor Bronze (Grade A / Spring Temper)	Magnetic: No Fairly resistant to corrosion Electrical conductivity: Fair (15% that of copper) Tensile strength is high Temperature resistance is high Effective surface for bearing Effective for making springs
Steel (Low Carbon / CRS / Commercial Quality)	Magnetic: Yes Electrical Conductivity: Fair (12% that of copper) Not resistant to corrosion if untreated Relatively inexpensive material with high tensile strength Highly versatile with many applications
Stainless Steel (300 Series)	Annealed State: 0.010 HH State: 0.005 - 0.009 FH State: 0.001 - 0.004 Magnetic: Slightly. Poorly magnetic in annealed state Highly versatile with many applications Higher tensile strength than standard steel Highly resistant to corrosion
Stainless Steel (400 Series)	Annealed State: 0.010 HH State: 0.005 - 0.009 FH State: 0.001 - 0.004 Magnetic: Slightly. Poorly magnetic in annealed state Highly versatile with many applications Higher tensile strength than standard steel Highly resistant to corrosion Can be additionally plated
Spring Steel High Carbon (1050 / 1074 / 1075 / 1095)	Higher than 0.005 Hardness can be increased through heat treatment Easily formable in annealed state Applications include springs, washers and clips
Titanium (AMS-4900)	Pure enough for commercial application Usable in extremely high temperatures Strength/weight ratio: High Suitable for aeronautic applications Relatively expensive Resistant to corrosion