

Type	Alloy	General Characteristics	Contains Lead	Material Cost Factor	Material Machining Factor
Aluminum	2011	Designed for machining. Excellent machinability. Chips break-up nicely. Holds tight tolerances well. Does not anodize as well as other aluminums. Poor weldability. Fair formability. Poor corrosion resistance.	Yes	1.70	0.38
	6061	Good machinability but chips are long and stringy and can be difficult to manage. Anodizes well. Excellent weldability. Good formability. Good to Excellent corrosion resistance.	No	2.10	0.63
	7075	High strength. Good machinability but chips are long and stringy and can be difficult to manage. Anodizes well. Good resistance weldability. (Gas and arc welding should be avoided.) Good formability. Fair to poor corrosion resistance.	No	2.57	0.90
	2024	High strength. Fair machinability. Chips are long and stringy and can be difficult to manage. Anodizes well. Poor weldability. Good formability. Fair to poor corrosion resistance.	No	2.44	0.90
Brass	C36000	Designed for machining. Excellent machinability. Chips break-up nicely. Holds tight tolerances well. Can be brazed, soldered, and butt welded. Avoid other welding methods. Poor formability. Fair to Excellent corrosion resistance.	Yes	3.28	0.86
	C69300	Designed as a lead free alternative to C36000. Very Good machinability. Chips are manageable. Holds tight tolerances well. Can be brazed, soldered, and butt welded. Good with other welding methods. Poor formability. Fair to Excellent corrosion resistance.	No	5.40	1.22
Copper	C18200	Poor machinability. Chips are long and stringy and can be difficult to manage. Poor thread rolling (tends to flake significantly). Excellent formability. Can be brazed, soldered, and butt welded. Avoid other welding methods.	No		8.57
Plastics	Acetal / Delrin				
	PEEK				
	Nylon				
Steel	12L14	Designed for machining. Excellent machinability. Chips break-up nicely. Holds tight tolerances well. Does not plate as well as other steels. Poor weldability. Fair formability. Poor corrosion resistance. Case harden only.	Yes	1.00	1.00
	1215	Designed for machining. Excellent machinability. Chips break-up pretty nicely. Holds tight tolerances well. Plates as well as other steels. Poor weldability. Fair formability. Poor corrosion resistance. Case harden only. Good no lead alternative to 12L14.	No	0.90	1.02
	Stressproof			1.09	
	1144			0.99	
	8620			1.16	
	4140			1.82	
	4340			2.39	
	1018			0.86	
	1045			0.92	
Stainless Steel	303			2.20	
	416			1.76	
	304			2.14	
	440C			4.57	
	316			2.77	
	17-4PH			3.81	