

6000 Series Aluminum Alloys

Number and Characteristics	Major Alloying Elements (percent)	Temper and Thickness	Tensile Strength - ksi				Elongation Percent	
			Ultimate		Yield			
			Min	Max	Min	Max		
6005								
Mechanical properties similar to 6061. Used in structural applications. (Preferred over 6061 for extrudability)	Si 0.6 - 0.9 Mg 0.40-0.6	-T1	Up thru 0.500	25.0	--	15.0	--	16.0
		-T5	Up thru 0.124 0.125-1.000	38.0	--	35.0	--	8.0
				38.0	--	35.0	--	10.0
6060								
Has better extrudability than 6063. The minimum mechanical properties (with the exception of minimum welded properties), response to finishing processes, and corrosion resistance are similar to 6063.	Si 0.30-0.6 Mg 0.35-0.6 Fe 0.10-0.30	-T1	Up thru 0.125	22.0	--	16.0	--	8.0
		-T61	Up thru 1.000 Up thru 0.124 0.125 - 1.000	22.0	30.0	16.0	25.0	8.0
				30.0	--	25.0	--	8.0
6061								
Most versatile of heat-treatable group. Will take considerable forming in T4. Good corrosion resistance. Used in transportation and structural applications.	Mg 0.8-1.2 Si 0.40-0.8 Cu 0.15-0.40 Cr 0.04-0.35	-0	All	--	22.0	--	16.0	16.0
		-T1	Up thru 0.625	26.0	--	14.0	--	16.0
		-T4, T4510 and T4511	All	26.0	--	16.0	--	16.0
				26.0	--	12.0	--	16.0
		-T51	Up thru 0.625	35.0	--	30.0	--	8.0
		-T6, T62, T6510 and T6511	Up thru 0.249 0.250 and Over	38.0	--	35.0	--	8.0
38.0	--			35.0	--	10.0		
6063								
The most popular extrusion alloy. Takes a good surface finish, is corrosion-resistant, and can be heat treated for strength.	Mg 0.45-0.9 Si 0.20-0.6	-0	All	--	19.0	--	--	18.0
		-T1	Up thru 0.500 0.501 - 1.000	17.0	--	9.0	--	12.0
				16.0	--	8.0	--	12.0
		-T4 and T42	Up thru 0.500 0.501 - 1.000	19.0	--	10.0	--	14.0
				18.0	--	9.0	--	14.0
		-T5	Up thru 0.500 0.501 - 1.000	22.0	--	16.0	--	8.0
				21.0	--	15.0	--	8.0
-T52	Up thru 1.000	22.0	30.0	16.0	25.0	8.0		
-T6 and T62	Up thru 0.124 0.125 - 1.000	30.0	--	25.0	--	8.0		
		30.0	--	25.0	--	10.0		
6463								
Designed to accept a bright dip finish through anodizing or polishing. Decorative trim applications; machine and heat-treatable. (High purity form of 6063)	Mg 0.45-0.9 Si 0.20-0.6	-T1	Up thru 0.500	17.0	--	9.0	--	12.0
		-T5	Up thru 0.500	22.0	--	16.0	--	8.0
		-T6 and T62	Up thru 0.124 0.124 - 0.500	30.0	--	25.0	--	8.0
30.0	--			25.0	--	10.0		