

Common extrusion aluminium alloys and their properties

Designation	Suitability						Temper	Mechanical Properties*		Common End Uses
	Forming	Machining	Welding	Brazing/ Soldering	Protective Anodising	Aesthetic Anodising		Proof Stress (min N/mm)	Tensile Strength (min N/mm)	
1050	Good	Poor	Good	Good	Excellent	Excellent	F	-	-	Electrical conductivity
1200	Good	Poor	Good	Good	Good	Good	-	-	65	Electrical/Heat Exchangers
2014A (L168)	Good	Good	Not Suitable	Not Suitable	Fair	Not Suitable	T4 T6 T6511	230 370 370	370 415 435	High strength aerospace
2024	Good	Good	Not Suitable	Not Suitable	Fair	Not Suitable	T3 T3510/11	260 260	393 393	High strength aerospace
3003	Excellent	Fair	Good	Good	Good	Poor	0	-	97	Formed heat exchangers
5083	Good	Good	Good	Not Suitable	Good	Good	0	125	275	Marine
6005	Good	Good	Good	Good	Good	Fair	T6	220	260	Medium strength commercial
6060	Good	Good	Good	Good	Good	Good	T4 T5 T6	60 100 150	120 145 190	General commercial
6061	Good	Good	Good	Good	Good	Fair	T4 T6 T6511	115 240 240	190 280 280	High/Med. strength commercial
6063	Good	Good	Good	Good	Good	Good	0 F T4 T5 T6	- - 70 110 160	140 max. - 130 150 195	General commercial
6063A	Good	Good	Good	Good	Good	Good	T4 T5 T6	90 160 190	150 200 230	Consistent forming
6082 (L111)	Good	Good	Good	Good	Good	Fair	0 F T4 T5 T6 T6511	- - 120 230 255 255	170 max. - 190 270 295 295	High strength commercial
6463	Good	Good	Good	Good	Good	Excellent	T4 T6	75 160	125 185	High polished commercial
7020	Poor	Good	Good	Good	Good	Good	T6	280	340	Aerospace/Automotive
7050	Fair	Good	Not Suitable	Not Suitable	Not Suitable	Poor	T7651	490	550	High strength aerospace
7075 (L160)	Fair	Good	Not Suitable	Not Suitable	Fair	Poor	T6	480	540	Very high strength aerospace

Please note: The above table shows some of the common alloys available that Capalex can extrude.
Whilst every effort is made to ensure the accuracy of the data provided, Capalex does not guarantee or accept liability for its accuracy.
*Properties given are typical and should only be used for comparisons of alloys. Actual values will depend on selection specification.

Useful information

Standard gauge (swg) to metric conversion table:

Standard gauge (swg)	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Thickness (mm)	4.88	4.47	4.06	3.66	3.25	2.95	2.64	2.34	2.03	1.83	1.63	1.42	1.22	1.02	0.91	0.81	0.71	0.61	0.56	0.51

Section weight in aluminium (kg/m) = Cross Section Area (mm) x 0.002712