

Aluminium Sheet



Thickness	Unit Weight (kg/sqm)	Weight (kg) per Sheet Size					
		2000 x 1000	2000 x 1250	2500 x 1000	2500 x 1250	3000 x 1250	3000 x 1500
1.2	3.252	6.50	8.13	8.13	10.2	12.2	14.6
1.5	4.065	8.13	10.2	10.2	12.7	15.2	18.3
2	5.420	10.8	13.6	13.6	16.9	20.3	24.4
3	8.130	16.3	20.3	20.3	25.4	30.5	36.6

Dimensions : Millimetres

Tolerance Thickness

Thickness	Thickness Tolerance (+ or -) for Given Width				
	501 to 1000	1001 to 1500	1501 to 2000	2001 to 2500	2501 to 3000
1.21 to 1.60	0.09	0.14	0.18	0.24	0.30
2.01 to 2.50	0.11	0.16	0.22	0.32	0.38
2.51 to 3.00	0.13	0.20	0.26	0.36	0.42

Dimensions : Millimetres

Width for Sheet

Thickness	Width Tolerance (+ or -) for Given Widths		
	500 to 1000	1001 to 2000	2001 to 3500
0.20 to 3.0	2.0	3.0	4.0

Dimensions : Millimetres

<http://www.farnell.com>
<http://www.newark.com>
<http://www.cpc.co.uk>



Length

Thickness	Length Tolerance (+ or -) for Given Lengths							
	Up to 1000	1001 to 2000	2001 to 3001	3001 to 5000	5001 to 7500	7501 to 10,000	10,001 to 12,500	12,501 to 15,001
0.20 to 3.00	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0

Dimensions : Millimetres

Sheet:

Aluminium sheet is defined as cold-rolled material over 0.2mm thick but not exceeding 6mm thick.

Alloy Selection Guide:

The wide range of alloys available can be broadly split into two groups, the work hardening alloys and the heat treatable alloys. It is important to advise your supplier if you intend to spin, draw or anodise the product.

Heat-treatable Alloys:

The strongest of the aluminium alloys are those that gain strength by special heat-treatment process. The alloys are identified by the suffix 'T' plus the addition of digits denoting variation of heat-treatment.

2014A:

One of the most widely used heat-treatable alloys, it offers a high strength with excellent machinability. It is widely used in highly stressed aircraft applications where strength to weight ratio is critical. The alloy has only fair corrosion resistance and so is frequently specified with a pure aluminium cladding. It does not respond well to MIG and TIG welding.

6082:

This medium/high strength alloy is the most popular of the heat treatable alloys. Normally supplied in the fully treated condition. Can also be fully annealed to allow cold working to be carried out. This alloy is readily anodised, machined and welded thus providing a good multi-purpose, durable and heat resistant alloy.

7075:

This is a high strength Al-Zn-Mg-Cu alloy. The tensile strength is typically 565MPa thus offering an outstanding strength to weight ratio for critical applications.

Work hardening alloys:

Alloys in this group harden and increase in strength as they are cold-rolled (or worked). Any one alloy, therefore, can have different strength and ductility properties depending upon how much cold-working has imposed. The degree of cold-working is denoted in the alloy designation by a suffix letter (H) and a digit from 1 to 8 indicating increasing strength.

Maximum ductility, often desirable for subsequent forming operations, is obtained by annealing a process in which the metal is heated to a temperature of around 360°C to remove the effects of any cold-working. Annealed metal is denoted by the suffix 'O' in the alloy designation.

1050, 1080 and 1200:

Commercially pure aluminium of varying grades of purity. These are easily formed and joined, but naturally have the lowest strength characteristics of all the alloys. Highly resistant to weathering and to chemical attack, these alloys are ideal for chemical processing plant applications where strength is not critical; pressings requiring high ductility and many panelling applications.

3103 and 3105:

3103 is a very popular alloy that offers higher strength than commercial purity metal but which retains excellent ductility, good corrosion resistance and joining properties. The alloy is widely used in the building and transport industries for a variety of flat and profile panelling and roofing applications. 3105 can be considered the "Green Alloy", being a resource friendly alloy manufactured almost exclusively from recycled material. The finished sheet and strip has accurate and consistent mechanical properties and forming characteristics. This alloy is particularly suitable for painting, making it popular and widely used in the sign making and building products industries. Anodising, however, is not recommended.

5005:

An alloy with a small percentage of added magnesium which has been formulated for decorative and architectural used where good anodising quality is required.

5251 and 5083:

These two magnesium-bearing alloys are another step up in strength. Importantly these alloys respond well to MIG and TIG welding and have particularly good corrosion resistance to salt water. Of the two, 5083 is the stronger and is ideal for high strength welded applications such as marine components, rail and road transport, cryogenic structures and a variety of pressure vessels.

Part Number Table

Description	Part Number
Aluminium Sheet, 1.2mm, PK4	93
Aluminium Sheet, 1.5mm, PK4	17078
Aluminium Sheet, 2mm, PK4	11398
Aluminium Sheet, 3mm, PK4	11404

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