

Aluminium 6106 Data Sheet

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6106 Overview

6106 is a medium strength, general purpose, architecturally pleasing, heat treatable alloy with good corrosion resistance and very good weldability. 6106 is typically ordered as temper T6 for general purpose applications though temper T4 is particularly good for cold forming followed by natural ageing.

Common Applications

6106 can be extruded to complex shapes applicable to a range of industrial and commercial applications where superior surface finish is important. It is commonly used for light structural applications, ladders, marine, automotive, light to medium transport componentry and commercial applications.

Welding

6106 has excellent weldability by all standard methods including GMAW (MIG) and GTAW (TIG). Filler alloy 4043 is the primary filler though 5356 wire is the suggested alternative.

Machining

Machinability of 6106 is fair to good.

Similar Products

Alloys 6060 and 6063 can be substituted for 6106 providing a lower mechanical solution whereas 6005A is a slightly harder solution. Alloys 6060 / 6063 / 6005A all have aesthetically attractive surface finishes suitable for substitution with 6106.

Chemical Composition Specification (%) Single values are maxima except as noted												
Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other			
									Each	Total		
6060	0.3-0.6	0.1-0.3	0.10	0.10	0.35-0.6	0.05	0.15	0.10	0.05	0.15		
6063	0.2-0.6	0.35	0.10	0.10	0.45-0.9	0.10	0.10	0.10	0.05	0.15		
6106	0.3-0.6	0.35	0.25	0.05-0.2	0.40-0.8	0.20	0.10	-	0.05	0.10		
6005A	0.5-0.9	0.35	0.30	0.50	0.40-0.7	0.30	0.20	0.10	0.05	0.15		



Mechanical Property Specification - Single values are maxima except as noted											
	Thickness mm			Elongation							
Alloy and Temper		Up to	Ultir	nate	Yie	eld	(% min in				
	Over		Min	Max	Min	Max	50mm)				
6060 T5		<12mm	150	-	110	-	8				
6063 T5		<12mm	150	-	110	-	8				
6063 T6		<25mm	205	-	170	-	8				
6106 T4		<150mm	130	-	70	-	12				
6106 T6		<10mm	235	-	210	-	8				
6106 T6	>10mm	<25mm	205	-	170	-	8				
6005A T5	All Thicknesses		260	-	240	-	8				

Standards Referenced

AS/NZS 1866:1997 Reconfirmed 2020 - Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes

AS/NZS 1665:2004 - Welding of aluminium structures

AAC (Australian Aluminium Council) publication - "Aluminium Standards Data and Design, Wrought products".

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