
Aluminium 1150

Data Sheet

1150 Overview

Alloy 1150 is a non-heat treatable rolled product supplied as rectangular or circular sheet, or coil. 1150 is a soft alloy with very good formability, welding and anodising qualities and with excellent corrosion resistance.

1150 Mass Conversion Factor: Kilograms (kg) per mm per square metre = 2.705kg

Anodising

1150 is very well suited to anodising and can also be chemically brightened.

Common Applications

1150 is typically used for general sheet metal work where moderate strength is acceptable. Typical applications include metal spinning, cookware, flashing, polished trims and lamp reflectors. Alloy 1050 has similar properties and applications.

*Other common alloys used in metal spinning where higher strengths are required include 6061, 5052 and 3003.

Welding

1150 has excellent weldability by all standard methods. Filler alloy 1100, 4043 and 5356 are common, dependant upon alloy joining combinations.

Machining

Machinability of 1150 is fair in softer tempers though improves as the tempers increase (increasing strength and hardness). Accuracy of machining is managed with high speeds, ample lubrication, sharp tools, positive rakes, adequate clearance and continuous cutting.

Chemical Composition Specification (%) Single values are maxima except as noted										
Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other	
									Each	Total
0	0.45	0.45	0.05-0.20	0.05	0.05	-	0.05	0.03	0.030	-
1050*	0.25	0.4	0.05	0.05	0.05	-	0.05	0.03	0.03	
6061	0.4-0.8	0.7	0.15-0.40	0.15	0.8-1.2	0.04-0.35	0.25	0.15	0.05	0.15

*Other specific elements: V 0.05

Mechanical Property Specification - Single values are maxima except as noted										
Alloy and Temper	Thickness mm		Tensile Strength				Elongation (% min in 50mm)			
	Over	Up to	Ultimate		Yield					
			Min	Max	Min	Max				
1150-H111/0	0.5	3.2	-	105	-	-	20-30			
1150-H16	0.5	4	115	150	-	-	2/5			
1050-H111/0	0.5	6	-	95	-	-	20-30			
1050-H16	0.5	4	115	140	-	-	3-5			
6061-O	0.25	3.25	-	150	-	85	14-18			

Bend radii

**Recommended Minimum Bend Radii for 90-Degree Cold Forming of Sheet of 3003
(Reference test method - ASTM E290) Thickness (t)**

Temper	0.8mm	1.6mm	3.2mm	4.8mm	6.0mm
O	0t	0t	0t	$\frac{1}{2}t$	1t
H12	0t	0t	$\frac{1}{2}t$	1t	1t
H14	0t	0t	1t	1t	$1\frac{1}{2}t$
H16	1t	1t	$1\frac{1}{2}t$	$2\frac{1}{2}t$	3t
H18	$1\frac{1}{2}t$	2t	$2\frac{1}{2}t$	$3\frac{1}{2}t$	$4\frac{1}{2}t$

Bend radii listed are minimum recommendations only for bending sheets without fracture. Application method based on cold forming in a standard press brake with air bend dyes. Alternative types of bending operations may require larger radii or smaller radii. Tooling quality and design may vary radii outcomes.

Material Specification & References

AS/NZS 1734:1997 Reconfirmed 2020 – Aluminium and aluminium alloys – Flat sheet, coiled sheet and plate

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