

2011 - ALUMINIUM ALLOY

Typical Analysis (Ave. values %)	Cu	Fe	Pb	Bi	Si	Zn	Al
	5.5	0.7	0.4	0.4	0.4	0.3	92.0
NEAREST STANDARD	BS			ISO			
	EN AW-2011			Al Cu6 BiPb			

DESCRIPTION	Heat treatable alloy with high strength, good machinability and fatigue strength. Standard condition of supply - Temper T4.
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APPLICATIONS	Applications where good machinability and high strength are required, such as machine parts, bolts, nuts, screws etc.
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MECHANICAL PROPERTIES	Temper	Tensile strength MPa	0.2% Proof stress MPa	Elong.A5 %	Elong.A50 %	Hardness Vickers
	T3	310-365	260-290	10-15	10-15	100
	T4	320-350	240-270	10-18	18	95
	T6	310-395	230-300	8-12	10-12	115
	T8	370-420	275-315	10-13	10-12	120

FABRICATION PROPERTIES	Machinability	Excellent
	Deep drawing	Poor
	Spinning	Poor
	Extruding	Good

PHYSICAL PROPERTIES	Density	2.84 (kg/dm ³)
	Melting point (Liquidus)	645°C
	Melting point (Solidus, Eutectic)	540°C
	Coefficient of thermal expansion	23- $\mu\text{mm}^{-1}\text{K}^{-1}$
	Thermal conductivity	177-W m ⁻¹ K ⁻¹
	Specific heat capacity	863 JKg ⁻¹ K ⁻¹
	Electrical resistivity	38 n Ω m
	Electrical conductivity	45% IACS

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JOINING PROPERTIES	Coated metal arc welding	Poor
	Soldering	Fair
	Brazing	Poor
	Oxy acetylene welding	Poor
	Gas shielded arc welding	Poor

CORROSION RESISTANCE	Industrial atmosphere	Poor
	Rural atmosphere	Fair
	Marine atmosphere	Poor
	General	Poor-Fair

Round Cold Drawn Temper T6										
SIZE RANGE	25	42	55	80	110	140	170	250		
	35	45	65	90	120	150	180			
	40	50	75	100	130	160	200			

Sizes normally stocked in Australia. Some branches may not hold the entire range.
Other sizes available on request.

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