

Aluminium Alloy EN AW 6023 (AC61) Conforming to RoHS(2002/95/EC) and ELV(2000/53/EC)



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Alloy EN AW 6023 is developed specifically for electronics and automotive industry for machining applications and it is renowned for good machining characteristics and excellent anodizing response. Used for automotive brake components, hydraulic valve blocks and many other applications. EN AW 6023 alloy is replacement for 6012 and 6262, where lead is replaced with tin and bismuth and retains all the technological properties of the original alloys.

Chemical Composition EN AW 6023:

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Each	Total	Other	Additional
AA6023	0,6 1,4	max 0,50	0,20 0,50	0,20 0,60	0,40 0,90	Max 0,05	max. 0,05	max. 0,05	max. 0,05	max. 0,05	max. 0,15	Sn=0,6-1,2 Bi=0,3-0,8	

Mechanical Properties EN AW 6023:

Cold Drawn									
Temper	Dimension		Rm min.		Rp _{0.2} min.		A	A (2")	HB min.
	mm	inch (")	MPa	ksi	MPa	ksi	% min.		
T6,T8	5 to 76.2	0.197 to 3	345	50	315	46	4	5	80
Extruded									
Temper	Dimension		Rm min.		Rp _{0.2} min.		A	A (2")	HB min.
	mm	inch (")	MPa	ksi	MPa	ksi	% min.		
T6 T6510 T6511	20 to 150	0.788 to 5.906	310	45	260	38	8	10	80
T6 T6510 T6511	150 to 180	5.906 to 7.087	260	38	200	29	8	10	80

Comparative Characteristics EN AW 6023:

Temper	Corrosion resistance		Cold workability	Anodizing Response	Brazeability	Weldability	
	General	Stress				Gas	Arc
T6	B	A	B	A	B	B	B
T6, T6510, T6511	B	A	B	A	B	B	B

Rating: A=Excellent, B=Good, C=Fair, D=Poor

Physical Properties EN AW 6023:

Density (g/cm ³)	2,71
Moduls of elasticity (MPa)	69400
Thermal conductivity (W/mK)	172
Coefficient of thermal expansion (20-100°) 10 ⁻⁶ / K	23,4
Electrical resistivity (MS/m)	26 (45% IACS)