ALUMINIUM ALLOY AA2044 (D80) CONFORMING TO ROHS II (2011/65/EU) AND ELV(2000/53/EC)

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Alloy AA2044 is developed specifically for electronics and automotive industry for excellent machining characteristics and mechanical properties.
AA2044 alloy is a direct replacement for 2030 and 2007, where lead it is replaced with tin and bismuth and retains all the technological properties of the original alloys.

Chemical Composition AA2044:

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Each	Total	Other	Additional
AA2044	max. 0,80	max. 0,70	3,3 4,5	0,20 1,0	0,50 1,3	max 0,10	max. 0,50	max. 0,20	max. 0,05	max. 0,05	max. 0,15	Sn=0,9-1,3 Bi=0,2-0,4 Ni max.0,10	

Mechanical Properties AA2044:

Cold Drawn									
Temper	Dimension		Rm min.		$Rp_{0.2}$ min.		A	A (2")	HB min.
	mm	inch (")	MPa	ksi	MPa	ksi	% min.		
T3, T351	7 to 76.2	0.275 to 3	370	54	240	35	7	7	100
Extruded									
Temper	Dimension		Rm min.		$Rp_{0.2}$ min.		A	A (2")	HB min.
	mm	inch (")	MPa	ksi	MPa	ksi	% min.		
T4, T4510, T4511	20 to 80	0.788 to 3.149	370	54	250	36	8	8	100
T4, T4510, T4511	80 to 180	3.149 to 7.087	340	50	220	32	8	8	90

Comparative Characteristics AA2044:

Temper	Corrosion resistance		Cold workability	Anodizing Response	Brazeability	Weldability	
	General	Stress				Gas	Arc
T3	D	C	B	B	D	D	B
T351	D	B	B	B	D	D	C
T4, T4510, T4511	D	C	B	B	D	D	B

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

Physical Properties AA2044:

Density (g/cm^3)	2,81
Modulus of elasticity (MPa)	74340
Thermal conductivity (W/m K)	130-160
Coefficient of thermal expansion (20-100°) 10^{-6} /K	23,0
Electrical resistivity (MS/m)	18-22 (31%-40% IACS)