

ALUMINIUM ALLOY AA2041 (D71) CONFORMING TO RoHS II (2011/65/EU) AND ELV(2000/53/EC)



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Alloy 2041 is the most free-machining of common aluminium alloy. It is renowned for its excellent machining characteristics and short chips.

AA2041 alloy is a direct replacement for 2011, where lead is replaced with tin and bismuth and retains all the technological properties of the original alloys. In the electronics industry the environment friendly and technologically advanced AA2041 alloy.

Chemical Composition AA2041:

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Each	Total	Other	Additional
AA2041	max. 0,40	max. 0,70	5,0 6,0	max 0,05	max 0,05	max 0,05	max. 0,30	max. 0,05	max 0,05	max. 0,05	max. 0,15	Sn=0,5-0,7 Bi=0,5-0,7	

Mechanical Properties AA2041:

Cold Drawn									
Temper	Dimension		Rm min.		Rp _{0.2} min.		A	A (2")	HB min.
	mm	inch (")	MPa	ksi	MPa	ksi	% min.		
T3	5 to 40	0.197 to 1.575	320	45	270	40	10	10	90
	40 to 50	1.575 to 1.969	300	43	250	36	10	12	90
	50 to 76.2	1.969 to 3	280	40	210	30	10	14	90
T8	5 to 76.20	0.197 to 3	370	54	270	40	8	12	110
Extruded									
Temper	Dimension		Rm min.		Rp _{0.2} min.		A	A (2")	HB min.
	mm	inch (")	MPa	ksi	MPa	ksi	% min.		
T4	20 to 180	0.788 to 7.087	275	40	125	18	14	14	80
T6	20 to 75	0.788 to 2.953	310	45	230	33	8	10	90
	75 to 180	2.953 to 7.087	295	43	195	28	6	10	90

Comparative Characteristics AA2041:

Temper	Corrosion resistance		Cold workability	Anodizing Response	Brazeability	Weldability	
	General	Stress				Gas	Arc
T3	D	D	A	C	D	D	B
T8	D	B	A	C	D	D	D
T4	D	D	A	C	D	D	B
T6	D	B	A	C	D	D	D

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

Physical Properties AA2041:

Density (g/cm ³)	2,83
Modulus of elasticity (MPa)	74630
Thermal conductivity (W/m K)	152-173
Coefficient of thermal expansion (20-100°) 10 ⁻⁶ /K	23,1
Electrical resistivity (MS/m)	22,6-26,1 (39%-45% IACS)

