

Aluminium Lithium Alloy

Typical Applications

- Aerospace
- High strength applications
- Statically and dynamically loaded fuselage structures
- Lower wing stringers
- Stiffness dominated designs

Product Description

2099 is an aluminium lithium alloy. The addition of lithium increases the strength modulus of the aluminium alloy while lowering its density. Extrusions are available in two tempers from 0.050 to 3.00 inch (1.2 to 76mm thicknesses).

Alloy 2099-T83	High strength and excellent corrosion resistance with moderate fracture toughness.
Alloy 2099-T8E67	Lower strength but very high fracture toughness and excellent fatigue crack growth resistance.

Alloy 2099 extrusions have been available since the mid 2000's and have been specified for use on many commercial aircraft and helicopter programs.

Key features:

- Low density
- High stiffness
- Superior damage tolerance
- Excellent corrosion resistance
- Excellent weldability

Corrosion Resistance

Excellent corrosion resistance

Weldability

Excellent.

Availability

Extrusions

Chemical Composition (weight %)

	Cu	Li	Zn	Mg	Mn	Zr	Ti	Fe	Si	Be	Others	Al	
min	2.40	1.60	0.40	0.10	0.10	0.05					0.05	Rem	
max	3.00	2.00	1.00	0.50	0.50	0.12	0.10	0.07	0.05	0.0001	0.15	Rem	

Mechanical Properties

		2099-T83		2099-T8E67
Thickness		0.50-0.999"	1.00-2.5"	1.00-2.5"
Tensile Strength, ksi (MPa)	L	81 (560)	83 (595)	77 (530)
	LT	76 (525)	75 (520)	74 (510)
Yield Strength, ksi (MPa)	L	76 (525)	78 (505)	70 (485)
	LT	70 (485)	68 (470)	62 (430)
Elongation, %	L	9	9	10
Tension Modulus, Msi (GPa)		11.3 (78)		

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

Smiths Belfast	02895 908 897
Smiths Biggleswade	01767 604 704
Smiths Birmingham	0121 728 4940
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Quality & Testing:



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