

Aluminium Lithium Alloy

Typical Applications

- Cryogenic temperature service
- Advanced material for aerospace components
- Weaponry systems
- Defence systems

Product Description

8090 is an aluminium lithium alloy which is a direct alternative to 2014 and 2024. This medium strength alloy has 10% less density and elastic modulus is increased by 11% in comparison with 2014 & 2014. The alloy has excellent mechanical properties and is designed to promote less density with increased stiffness. It is used as an advanced material in the design of high technology parts for the aerospace sector. It is also used in defence and weaponry systems.

Key features:

- A medium strength aluminium lithium alloy
- Alternative to 2014 and 2024
- In comparison alloys density is reduced by approx. 10%
- Elastic modulus is increased by approx. 11%.
- Excellent mechanical properties

Corrosion Resistance

Excellent corrosion resistance

Weldability

Excellent.

Availability

Extrusions

Chemical Composition (weight %)

	Al	Li	Cu	Mg	Fe	Zn	Si	Ti	Cr	Mn	Zr	Other
min	93.00	2.20	1.00	0.60							0.040	≤0.050
max	96.20	2.70	1.60	1.30	≤0.30	≤0.25	≤0.20	≤0.10	≤0.10	≤0.10	0.16	≤0.15

Mechanical Properties

Tensile strength	450 MPa
Yield strength	370 MPa
Elongation at break	7%
Elastic modulus	77 GPa
Shear strength	270 MPa
Hardness, Brinell (@load 500 kg; thickness 10.0 mm)	121
Hardness, Knoop (converted from Brinell hardness value)	151
Hardness, Rockwell A (converted from Brinell hardness value)	47.2
Hardness, Rockwell B (converted from Brinell hardness value)	75
Hardness, Vickers (converted from Brinell hardness value)	137

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:

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Quality & Testing:



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