

7075 Aluminium

Technical Datasheet



Service. Quality. Value.

Commercial Aluminium Alloy

Applications

- Aircraft structures
- Gears & shafts
- Automotive

Product Description

7075 aluminium alloy is a very high strength aerospace aluminium and is commonly used in applications where the strength of the material is critical and where the need for good corrosion resistance is not important. Offering superior stress corrosion resistance, 7075 provides very high yield and tensile strengths which is dictated by the particular chosen temper.

Key features:

- Very high strength aerospace aluminium
- Used where high strength is critical and where good corrosion resistance is not important
- Up to 465 MPa yield strength and 540 MPa tensile strength depending on temper
- Superior stress corrosion

Machinability

Fair

Availability

Bar, sheet, plate

Chemical Composition (weight %)

	Si	Fe	Cu	Mn	Cr	Mg	Zn	Ti	Al	Others
min.			1.20		0.18	2.10	5.10		Bal	
max.	0.40	0.50	2.00	0.30	0.28	2.90	6.10	0.20	Bal	0.15

Mechanical Properties

Tensile Strength 40-78 ksi, 275 - 540 MPa
Yield Strength 24-68 ksi, 455 - 465 MPa

Physical Properties

Density 2.81 g/cm³
Melting Point 635 °C
Modulus of Elasticity 72 GPa
Thermal Conductivity 134-160 W/m.K
Electrical Resistivity 40% IACS

Properties dependent on chosen temper.

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
Smiths Bristol 0117 971 2800
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Quality & Testing:



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