

7050 Aluminium

Technical Datasheet



Service. Quality. Value.

Commercial Aluminium Alloy

Applications

- Fuselage frames
- Bulkheads
- Wing skins
- Aerospace structures
- Commercial & military aircraft applications

Product Description

7050 aluminium is a heat-treatable alloy which is known as a commercial aerospace alloy. The alloy offers a combination of high strength, high fatigue strength and high resistance to stress corrosion cracking. Particularly suited to heavy plate applications, the material is used to build fuselage frames, wing skins and other aerospace structures. 7050 alloy is available in two tempers.

Availability

Bar, plate, sheets

Key features:

- Strong mechanical strength
- Good stress corrosion cracking resistance and toughness
- Particularly suited to heavy plate applications
- Available in two tempers, T7651 & T7451

Related Material Specifications

- AMS 4108
- ASTM B247
- QQ A-430
- AMS 4201
- ASTM B316

Corrosion Resistance

Excellent resistance to exfoliation corrosion

Chemical Composition (weight %)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Zr	Ti	Al	Others
min.			2.0		1.9		5.7	0.08		Bal	0.05
max.	0.12	0.15	2.6	0.10	2.6	0.04	6.7	0.115	0.06	Bal	0.15

Mechanical Properties

Tensile Strength	515 MPa
Yield Strength	455 MPa
Fatigue Strength	240 MPa
Elongation A50 mm	11%

Physical Properties

Density	2.70 g/cm ³
Melting Point	494 °C
Modulus of Elasticity	70-80 GPa

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
Smiths Chelmsford	01245 466 664
Smiths Gateshead	0191 469 5428
Smiths Horsham	01403 261 981

Smiths Leeds	0113 307 5167
Smiths Manchester	0161 794 8650
Smiths Norwich	01603 789 878
Smiths Nottingham	0115 925 4801
Smiths Redruth	01209 315 512
Smiths Verwood	01202 824 347
Main Office	0845 527 3331

Quality & Testing

www.smithmetal.com info smithmetal.com

All information in our data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading.