

3103 Aluminium

Technical Datasheet



Service. Quality. Value.

Commercial Aluminium Alloy

Applications

- Heat exchangers
- Heating & cooling systems
- Aircraft & military components
- Vehicle radiators
- Corrugated roofing
- Cooking utensils & kitchen equipment
- Air conditioning evaporators

Product Description

3103 aluminium alloy is a commercial aluminium which is close in properties to 3003. With very good resistance to atmospheric corrosion and excellent mechanical properties, 3103 is a versatile alloy which is used in the aerospace, oil and gas industry and automotive sector amongst others. The material has improved mechanical properties over 1000 series aluminium alloys, especially at elevated working temperatures. This feature widens the use of the alloy as a construction cladding material.

Key features:

- Medium strength alloy
- Good resistance to atmospheric corrosion
- Properties very close to 3003
- Very good weldability

Related Material Specifications

- AlMn1

Weldability

Very good

Corrosion Resistance

Very good

Availability

Plate, Sheet

Chemical Composition (weight %)

Weight (%)	Mn	Fe	Cu	Mg	Si	Zn	Cr	Ti+Zr	Al	Other
min	0.90								Bal	0.05
max.	1.50	0.70	0.10	0.05	0.50	0.20	0.10	0.10	Bal	0.15

Mechanical Properties

Tensile Strength	140 MPa min
Elongation A50 mm	8% min
Shear Strength	90 MPa
Hardness Vickers	46 HV
Proof Stress	110 Mpa min

Physical Properties

Density	2.73 g/cm ³
Melting Point	655°C
Thermal Expansion	23.1 x10 ⁻⁶ /K
Modulus of Elasticity	69.5 GPa
Thermal Conductivity	160 W/m.K
Electricity Resistivity	42% IACS

The properties above are for material in the H14 condition

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:



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