

Aluminium Alloy

QQ-A-250/4 T351 Plate



SPECIFICATIONS

Aerospace	QQ-A-250/4 T351
Commercial	2024

A medium to high strength alloy with, dependent upon temper, minimum Proof Stress up to 57 ksi / 390 Mpa and minimum Tensile Strength up to 66 ksi / 455 MPa

CHEMICAL COMPOSITION

SAE AMS QQ-A-250/4 Alloy QQ A 250/4	
Element	% Present
Copper (Cu)	3.8 - 4.9
Magnesium (Mg)	1.2 - 1.8
Manganese (Mn)	0.3 - 0.9
Silicon (Si)	0.5 max
Iron (Fe)	0.5 max
Zinc (Zn)	0.25 max
Titanium + Zirconium (Ti+Zr)	0.2 max
Titanium (Ti)	0.15 max
Others (Total)	0.15 max
Chromium (Cr)	0.1 max
Other (Each)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy QQ-A-250/4 has similarities to the following standard designations and specifications **but may not be a direct equivalent:**
AMS 4035, Alloy 2024, UNS A92024

TEMPER TYPES

Alloy QQ-A-250/4 is supplied in a wide range of tempers:

T351 is intended to provide material with low residual stresses and thus minimal distortion during machining, but does not provide optimal corrosion resistance.

- O - Soft
- T3 - Solution heat treated, cold worked and naturally aged
- T42 - Solution heat treated and naturally aged to a substantially stable condition
- T81 - Solution heat treated, cold worked then artificially aged
- T351 - Solution heat treated then stress relieved by stretching. Equivalent to T4 condition.
- T4 - Solution heat treated and naturally aged to a substantially stable condition
- T62 - Solution heat treated then artificially aged by the user
- T851 - Solution heat treated then stress relieved by stretching then artificially aged.
- T361 - Solution heat treated then stress relieved by stretching.
- T72 - Solution heat treated then specially artificially aged for resistance to stress corrosion
- T861

SUPPLIED FORMS

Alloy QQ-A-250/4 T351 is supplied in plate and sheet

- Plate
- Sheet

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.79 g/cm ³
Melting Point	640 °C
Thermal Expansion	23.1 x10 ⁻⁶ /K
Modulus of Elasticity	73 GPa
Thermal Conductivity	121-150 W/m.K
Electrical Resistivity	30-40 % IACS

'Typical' Physical Properties are given

MECHANICAL PROPERTIES

The Mechanical Properties given are for Plate in the T351 temper.

Thickness (mm)	Proof Strength (Min)	Tensile strength (Min)	Elongation % (Min)
Over 6.6 up to & incl. 12.6	290	441	12
12.7 up to & incl. 25.4	290	434	8
Over 25.4 up to & incl. 38.1	290	427	7
Over 38.1 up to & incl. 50.8	290	427	6
Over 50.8 up to & incl. 76.2	290	414	4
Over 76.2 up to & incl. 101.6	283	393	4

CONTACT

Address: Gould Alloys Ltd
Markham Lane
Markham Vale
Chesterfield
S44 5HS
United Kingdom
Tel: +44 (0) 1246 263300
Email: sales@gouldalloys.co.uk
Web: www.gouldalloys.co.uk

REVISION HISTORY

Datasheet Updated 07 January 2014

DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

Advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. All transactions are subject to the Company's current Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.