

SPECIFICATIONS

Commercial 2024 BARE

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:
AMS 4035, Alloy 2024, UNS A92024

TEMPER TYPES

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

- 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 is supplied in plate and sheet

- Plate
- Sheet

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.74 g/cm ³
Melting Point	640 °C
Thermal Expansion	23.1 x10 ⁻⁶ /K
Modulus of Elasticity	73 GPa
Thermal Conductivity	193 W/m.K
Electrical Resistivity	50.5 % IACS

MECHANICAL PROPERTIES

SAE AMS QQ-A-250/4 Sheet	
Property	Value
Proof Stress	97 Min MPa
Tensile Strength	221 Min MPa
Elongation A50 mm	12 Min %

Mechanical Properties shown are for 'O' temper in thicknesses over 0.2mm up to and including 12.6mm

CONTACT

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REVISION HISTORY

Datasheet Updated	05 December 2013
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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.

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