Aluminium Alloy
QQ-A-225/8 T651 Bar

GOULD ALLOYS
THE LEADING EDGE IN METALS

SPECIFICATIONS

Aerospace	QQ-A-225/8 T651
Commercial	6061

A medium strength aerospace aluminium alloy with, depending upon temper, Yield Strength of up to 35 ksi (240 MPa) and Tensile Strength of 42 ksi (290 MPa). This alloy is selected where a combination of strength, weldability and workability are required.

CHEMICAL COMPOSITION

SAE AMS QQ-A-225/8
Alloy QQ A 225/8

Element	% Present
Magnesium (Mg)	0.8 - 1.2
Silicon (Si)	0.4 - 0.8
Iron (Fe)	0.7 max
Copper (Cu)	0.15 - 0.4
Chromium (Cr)	0.04 - 0.35
Zinc (Zn)	0.25 max
Manganese (Mn)	0.15 max
Titanium (Ti)	0.15 max
Others (Total)	0.15 max
Other (Each)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy QQ-A-225/8 has similarities to the following standard designations and specifications **but may not be a direct equivalent:**
AMS 4113, AMS 4115, Alloy 6061, UNS A96061

TEMPER TYPES

Alloy QQ-A-225/8 is supplied in a wide range of tempers:

- O - Soft
- T4 - Solution heat treated and naturally aged to a substantially stable condition
- T42 - Solution heat treated and naturaly aged to a substantially stable condition
- T451 - Solution heat treated then stress relieved by stretching. Equivalent to T4.
- T6 - Solution heat treated and artificially aged
- T62 - Solution heat treated then artificially aged by the user
- T651 - Solution heat treated, stress relieved by stretching then artificially aged

SUPPLIED FORMS

Alloy QQ-A-225/8 is supplied in bar, rod, wire, tube and extruded sections:

- Bar
- Extrusions

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.70 g/cm³
Melting Point	650 °C
Thermal Expansion	23.4 x10^{-6} /K
Modulus of Elasticity	70 GPa
Thermal Conductivity	166 W/m.K
Electrical Resistivity	0.040 x10^{-6} Ω .m

'Typical' Physical Properties are given

MECHANICAL PROPERTIES

SAE AMS QQ-A-225/8
Bar
12.7mm to 203.2mm

Property	Value
Proof Stress	241 Min MPa
Tensile Strength	290 Min MPa
Elongation A50 mm	10 Min %

Thes Mechanical Properties apply to Bar in diameters 12.7mm to 203mm in the T651 temper

[1 OF 2] CONTINUED

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REVISION HISTORY

Datasheet Updated	14 January 2019

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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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