

## 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 naturally 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/cm <sup>3</sup>
Melting Point	650 °C
Thermal Expansion	23.4 x10 <sup>-6</sup> /K
Modulus of Elasticity	70 GPa
Thermal Conductivity	166 W/m.K
Electrical Resistivity	0.040 x10 <sup>-6</sup> 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 %

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

## CONTACT

Address: (incorporated in the USA)  
Tel: +44 (0)1371 811 642  
Email: info@aerometalsalliance.com

## REVISION HISTORY

Datasheet Updated 14 January 2019

## 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.