

Aluminium Alloy

QQ-A-200/11 T6511 Bar



SPECIFICATIONS

Commercial	7075
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A very high strength aerospace aluminium alloy with, depending upon temper, Yield Strength of 24-68 ksi (165 - 465 MPa) and Tensile Strength of 40-78 ksi (275 - 540 MPa).

This alloy is used where high strength is required and where good resistance to general corrosion is NOT important.

CHEMICAL COMPOSITION

SAE AMS QQ-A-200/11
Alloy QQ A 200/11

Element	% Present
Zinc (Zn)	5.1 - 6.1
Magnesium (Mg)	2.1 - 2.9
Copper (Cu)	1.2 - 2
Iron (Fe)	0.5 max
Silicon (Si)	0.4 max
Manganese (Mn)	0.3 max
Chromium (Cr)	0.18 - 0.28
Titanium (Ti)	0.2 max
Others (Total)	0.15 max
Other (Each)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy QQ-A-200/11 has similarities to the following standard designations and specifications **but may not be a direct equivalent:**

AMS 4166, AMS 4168, AMS 4169

TEMPER TYPES

Alloy QQ-A-200/11 is supplied in a wide range of tempers:

- O - Soft
- T6 - Solution heat treated and artificially aged
- T62 - Solution heat treated then artificially aged by the user
- T6510 - Solution heat treated and stress-relieved by stretching then artificially aged with no straightening after aging
- T6511 - Solution heat treated and stress-relieved by stretching then artificially aged with minor straightening after aging
- T73 - Solution heat treated then specially artificially aged for resistance to stress corrosion
- T7310
- T7311
- T8511 - Solution heat treated, stress-relieved by stretching then artificially aged
- T7351 - Solution heat treatment then specially artificially aged for resistance to stress corrosion.
- T73511

SUPPLIED FORMS

Alloy QQ-A-200/11 T6511 is supplied in extruded bar

- Bar
- Extrusions

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.81 g/cm ³
Melting Point	635 °C
Thermal Expansion	23.5 x10 ⁻⁶ /K
Modulus of Elasticity	72 GPa
Thermal Conductivity	134-160 W/m.K
Electrical Resistivity	40 % IACS

'Typical' Physical Properties are given

MECHANICAL PROPERTIES

These Mechanical Properties are for Bar in the T6511 temper

Diameter (mm)	Proof Strength (Min)	Tensile Strength (Min)	Elongation % (Min)
Up to & incl. 6.3	482	538	7
Over 6.3 up to & incl. 12.7	503	558	7
Over 12.7 up to & incl. 76.2	496	558	7
Over 76.2 up to & incl. 114	489	558	7
Over 114 up to & incl. 127	469	538	6

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REVISION HISTORY

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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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