

## SPECIFICATIONS

|            |      |
|------------|------|
| Commercial | 2024 |
|------------|------|

A high strength alloy with, dependent upon temper, minimum Proof Stress up to 56 ksi / 385 Mpa and minimum Tensile Strength up to 70 ksi / 482 MPa

## CHEMICAL COMPOSITION

| SAE AMS QQ-A-200/3<br>Alloy QQ-A-200/3 |           |
|----------------------------------------|-----------|
| 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 (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-200/3 has similarities to the following standard designations and specifications:  
AMS 4164, AMS 4165

## TEMPER TYPES

Alloy QQ-A-200/3 is supplied in a range of tempers:

- T3 - Solution heat treated, cold worked and naturally aged
- T8511 - Solution heat treated, stress-relieved by stretching then artificially aged
- T3511 - Solution heat treated and stress-relieved by stretching. Equivalent to T4 condition.

## SUPPLIED FORMS

Alloy QQ-A-200/3 is supplied as Extruded Bar

- Bar
- Extrusions

## GENERIC PHYSICAL PROPERTIES

| Property               | Value                     |
|------------------------|---------------------------|
| Density                | 2.74 g/cm <sup>3</sup>    |
| Melting Point          | 640 °C                    |
| Thermal Expansion      | 23.1 x10 <sup>-6</sup> /K |
| Modulus of Elasticity  | 73 GPa                    |
| Thermal Conductivity   | 121 W/m.K                 |
| Electrical Resistivity | 30 % IACS                 |

## MECHANICAL PROPERTIES

These values apply to QQ-A-200/3 bar in the T8511 temper

| Diameter (mm)                 | Proof Strength (Min) | Tensile Strength (Min) | Elongation % (Min) |
|-------------------------------|----------------------|------------------------|--------------------|
| Up to & incl. 6.25mm          | 386                  | 441                    | 4                  |
| Over 6.3mm up to & incl. 38mm | 400                  | 455                    | 5                  |
| Over 38mm                     | 400                  | 455                    | 5                  |

## CONTACT

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

## REVISION HISTORY

Datasheet Updated 14 January 2019

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