

## Aluminium Alloy QQ-A-225/9 T651 Bar

### SPECIFICATIONS

|            |                 |
|------------|-----------------|
| Aerospace  | QQ-A-225/9 T651 |
| Commercial | 7075            |

A high strength aerospace aluminium alloy offering good corrosion resistance.

### CHEMICAL COMPOSITION

| SAE AMS QQ-A-225/9<br>Alloy QQ A 225/9 |             |
|----------------------------------------|-------------|
| 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     |

### TEMPER TYPES

Alloy QQ-A-225/9 is supplied in a range of tempers:

- T651 - Solution heat treated, stress relieved by stretching then artificially aged
- T7351 - Solution heat treatment then specially artificially aged for resistance to stress corrosion.

### SUPPLIED FORMS

Alloy QQ-A-225/9 T6511 is supplied in bar/rod

- Bar

### GENERIC PHYSICAL PROPERTIES

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

'Typical' Physical Properties are given

### MECHANICAL PROPERTIES

| SAE AMS QQ-A-225/9<br>Bar<br>12.7mm to 101.6mm |             |
|------------------------------------------------|-------------|
| Property                                       | Value       |
| Proof Stress                                   | 455 Min MPa |
| Tensile Strength                               | 531 Min MPa |
| Elongation A50 mm                              | 7 Min %     |

Mechanical Properties are for T651 temper Bar in diameters 12.7mm to 101mm

## CONTACT

|          |                                                                                               |
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## REVISION HISTORY

|                   |                 |
|-------------------|-----------------|
| Datasheet Updated | 14 January 2019 |
|-------------------|-----------------|

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