

SPECIFICATIONS

Commercial

2024 Clad

A medium to high strength alloy with, dependent upon temper, minimum Proof Stress up to 56 ksi / 385 Mpa and minimum Tensile Strength up to 64 ksi / 440 MPa

CHEMICAL COMPOSITION

SAE AMS QQ A 250/5
Alloy QQ a 250/5

| 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 + Zirconium (Ti+Zr) | 0.2 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-250/5 has similarities to the following standard designations and specifications **but may not be a direct comparison:**

Alloy 2024, UNS A92024, AMS 4040, AMS 4041, AMS 4194, AMS 4195, AMS 4274

TEMPER TYPES

Alloy QQ-A-250/5 is supplied in a wide range of tempers:

- O - Soft
- T3 - Solution heat treated, cold worked and naturally aged
- T361 - Solution heat treated then stress relieved by stretching.
- T4 - Solution heat treated and naturally aged to a substantially stable condition
- T42 - Solution heat treated and naturally aged to a substantially stable condition
- T81 - Solution heat treated, cold worked then artificially aged
- T851 - Solution heat treated then stress relieved by stretching then artificially aged.
- T861

SUPPLIED FORMS

Alloy QQ-A-250/5 is supplied in CLAD plate and sheet

- Plate
- Sheet

GENERIC PHYSICAL PROPERTIES

| Property | Value |
|------------------------|---------------------------|
| Density | 2.74 g/cm ³ |
| Melting Point | 640 °C |
| Thermal Expansion | 23.1 x10 ⁻⁶ /K |
| Modulus of Elasticity | 73 GPa |
| Thermal Conductivity | 193 W/m.K |
| Electrical Resistivity | 50.5 % IACS |

MECHANICAL PROPERTIES

Mechanical Properties shown are for 'O' temper

| Thickness (mm) | Proof Strength (Min) | Tensile Strength (Min) | Elongation % (Min) |
|-----------------------------|----------------------|------------------------|--------------------|
| Over 0.2 up to & incl. 1.5 | 97 | 207 | 12 |
| Over 1.6 up to & incl. 12.6 | 97 | 221 | 12 |

CONTACT

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REVISION HISTORY

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|-------------------|------------------|
| Datasheet Updated | 18 December 2013 |
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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.

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