

# Aluminium Alloy

## G.AL C250 Precision Milled Plate



### SPECIFICATIONS

|            |      |
|------------|------|
| Commercial | 5083 |
|------------|------|

G.AL C250 Precision Milled Plate, Alloy 5083 is supplied homogenised and stress relieved in thicknesses from 5mm to 100mm

It is precision milled to a roughness Ra of 0.4 microns and supplied folied on both sides.

### CHEMICAL COMPOSITION

| G.AL C250 Alloy 5083<br>Precision Milled Plate |             |
|--|-------------|
| Element  | % Present   |
| Magnesium (Mg)                                 | 4.00 - 4.90 |
| Manganese (Mn)                                 | 0.40 - 1.00 |
| Iron (Fe)                                      | 0.40 max    |
| Silicon (Si)                                   | 0.0 - 0.40  |
| Titanium (Ti)                                  | 0.05 - 0.25 |
| Chromium (Cr)                                  | 0.05 - 0.25 |
| Copper (Cu)                                    | 0.10 max    |
| Others (Total)                                 | 0.0 - 0.15  |
| Zinc (Zn)                                      | 0.0 - 0.10  |
| Other (Each)                                   | 0.0 - 0.05  |
| Aluminium (Al)                                 | Balance     |

### SUPPLIED FORMS

- Plate

### GENERIC PHYSICAL PROPERTIES

| Property               | Value                     |
|------------------------|---------------------------|
| Density                | 2.66 g/cm <sup>3</sup>    |
| Melting Point          | 570 °C                    |
| Thermal Expansion      | 23.3 x10 <sup>-6</sup> /K |
| Modulus of Elasticity  | 70 GPa                    |
| Thermal Conductivity   | 110-130 W/m.K             |
| Electrical Resistivity | 29-32 % IACS              |
| Heat Capacity          | 900 J/kgK                 |

### MECHANICAL PROPERTIES

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|--|-------------|
| Property                                     | Value       |
| Proof Stress                                 | 110-130 MPa |
| Tensile Strength                             | 230-260 MPa |
| Hardness Brinell                             | 68-73 HB    |
| Elongation A                                 | 10-15 %     |

### TOLERANCES

| Thickess (mm) | Flatness Tol (mm) | Thickness Tol (mm) | Width & Length Tol (mm) |
|---------------|-------------------|--------------------|-------------------------|
| 5             | 0.80              | +/- 0.1            | -0 / +20                |
| 6-12.7        | 0.40              | +/- 0.1            | -0 / +20                |
| Over 12.7     | 0.13              | +/- 0.1            | -0 / +20                |

## CONTACT

**Address:** Please make contact directly with your local service centre, which can be found via the Locations page of our web site  
**Web:** [www.aalco.co.uk](http://www.aalco.co.uk)

## REVISION HISTORY

**Datasheet Updated** 16 February 2023

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