

## 5083 ALUMINIUM PLATE - MAGNESIUM

### RELATED SPECIFICATIONS:

Australia	AS1734:1997
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### DESCRIPTION:

5083 offers the highest strength of all non-heat treatable alloys, containing approximately 4.5% magnesium, 0.7% manganese and 0.13% chromium.

### APPLICATIONS:

Welded pressure vessels, marine applications, drilling rigs, transportation equipment, and general engineering. Material can be anodized to aid corrosive resistance.

### MECHANICAL PROPERTIES:

Temper	Thickness mm	Yield stress $R_{p0.2}, N/mm^2$ , min	Ultimate tensile Stress, $R_m, N/mm^2$	Elongation $A_5, \%$ , min.
H112	6-40	275	125	10
	40-75	270	115	10
H116	3-30	305	215	10
H321	5-40	305-385	215-295	10
	40-75	280-385	200-295	10

### ALUMINIUM PLATE TEMPER CODES:

Code	Description
H112	No special control over amount of strain hardening. Some minimum strength limits set.
H321	Strain hardened less than amount required for a controlled H32 temper.
H116	Acceptable resistance to stress, cracking and exfoliation attack under marine corrosive conditions

### FORMING:

5XXX aluminium alloys are easily cold formed. Formability being described by minimum cold bend radii. Formability tends to increase as alloy strength decreases.

### WELDING:

5XXX aluminium alloys are easily welded using GMA-W or GTA-W processes. Weld strength equals the minimum annealed strength (O temper) of the welded 5XXX alloy. Welds also show good ductility, facilitating cold forming.

### CORROSION RESISTANCE:

5083-116 aluminium alloys generally have excellent corrosion resistance, often being used in marine applications.

### PLATE SIZE RANGE (Width 1200mm x 2400mm) DIA MM:

H112 – 32/40/50/100

H116 – 8/10/12