

Think **future**. Think aluminium.

HEAD OFFICE | HULAMIN ROLLED PRODUCTS

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HULAMIN

5083 MARINE PLATE

ROLLED PRODUCTS

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5083 MARINE PLATE

Aluminium alloy 5083 is known for exceptional strength in an extreme environment. 5083 is resistant to attack by both seawater and industrial chemical environments. 5083 retains exceptional strength after welding. It has the highest strength of the non-heat treatable alloys produced by Hulamini.

CHEMICAL COMPOSITION (IN WEIGHT %)

%	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al
									Each	Total	
min	-	-	-	0.4	4.0	0.05	-	-			Bal
max	0.40	0.40	0.10	1.0	4.9	0.25	0.25	0.25	0.05	0.15	

PHYSICAL PROPERTIES

Property	Value	Unit
Density	2.65	g/cm ³
Thermal Conductivity at 25°C	117	W/m.K
Electrical Conductivity	17	S/m
Modulus of Elasticity	71	GPa
Coefficient of linear expansion	23.8 x 10 ⁻⁶	/°C
Melting Range	580 - 640	°C

MECHANICAL PROPERTIES

Alloy & Temper	Proof Stress (MPa)	Tensile Strength (MPa)	Min. % Elongation	Bend Radius
5083 H116 & H321	215 min	305 min	10%	2.5 x t for t up to 6mm
5083 H32	215 min	305 - 380	8%	2.5 x t for t up to 6mm
5083 H111	125 min	275 min	15%	1.5 x t for t up to 6mm



Marine

PROCESSING ATTRIBUTES

Characteristics	
Bending / Forming	Good
Weldability (TIG/MIG)	Very good
Recommended filler alloy for TIG/MIG	5183 preferred also 5356

CERTIFICATIONS

Certification Body	Alloy	Temper	Max Thickness
ABS	5086	H116 & H321	38mm
	5083		
DNV	5083	O, H111, H112, H116, H321	32mm
Lloyds Register of shipping	5083	O, H112, H116, H321	25mm
		H111	30mm

SIZES AVAILABLE

Alloy & Temper	Thickness (mm)	Width (mm)	Length (mm)
5083 H116 & H321	3 - 32	1200 - 1850	2400 - 7500
5083 H111	3 - 60	1200 - 1850	2400 - 7500

